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POORMAN'S POULTRY GUIDE



First Edition
January, 1922



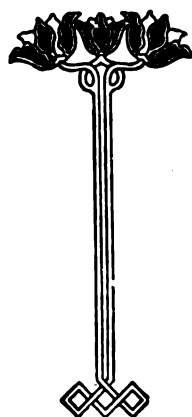
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POORMAN'S POULTRY GUIDE



FIRST EDITION
JANUARY, 1922

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JOHN G. POORMAN
Tinley Park, Ill.

JOHN G. POORMAN

TINLEY PARK, ILL., U.S.A.

POORMAN'S

200 EGG

STRAINS

VIGOR

SIZE

QUALITY

EGGS

STOCK

CHICKS

WHITE ORPINGTONS

R.C. RHODE ISLAND REDS

BARRIED PLYM. ROCKS

WHITE WYANDOTTES

TRAP-NESTED

BRED-TO-LAY

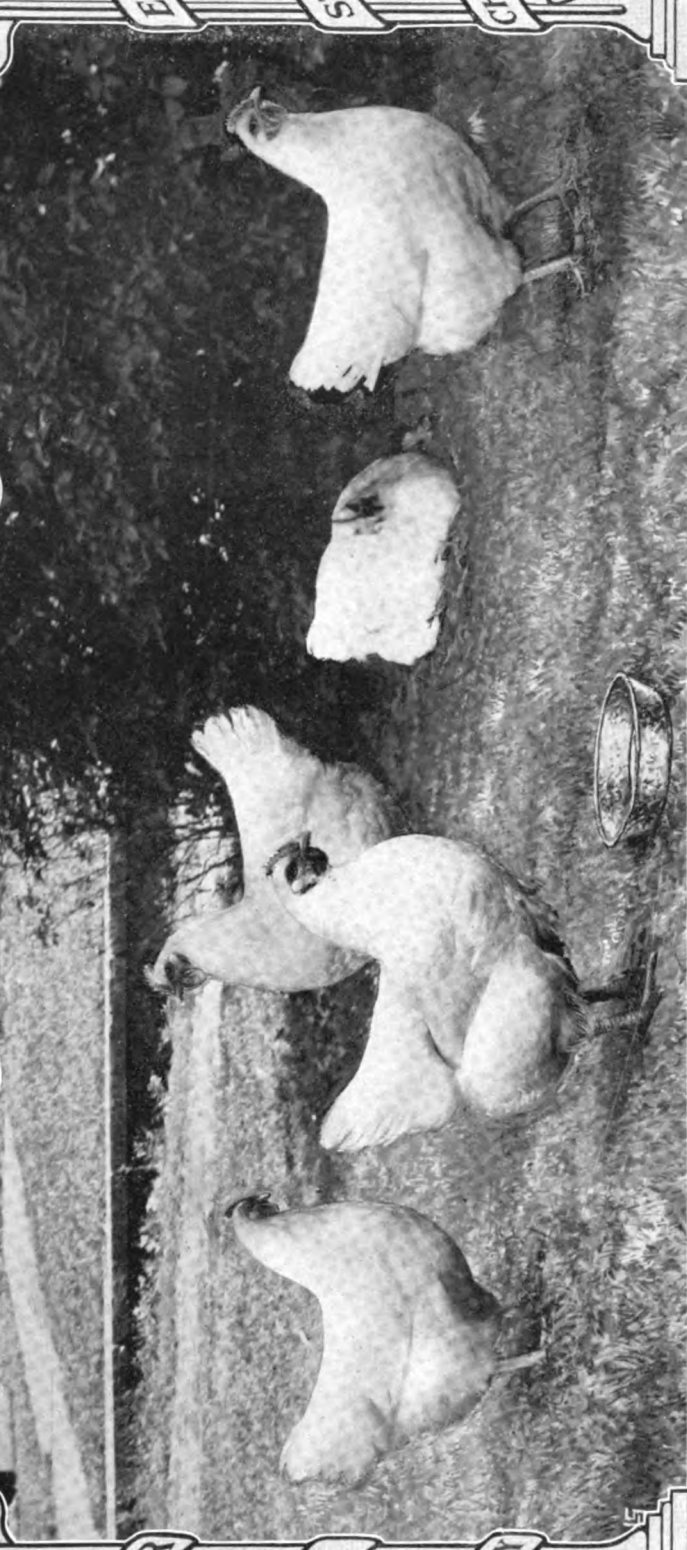
POULTRY

BUFF ORPINGTONS

S.C. RHODE ISLAND REDS

WHITE PLYM. ROCKS

S.C. WHITE LEGHORNS



A pen of bred-to-lay white plymouth rocks

Introduction

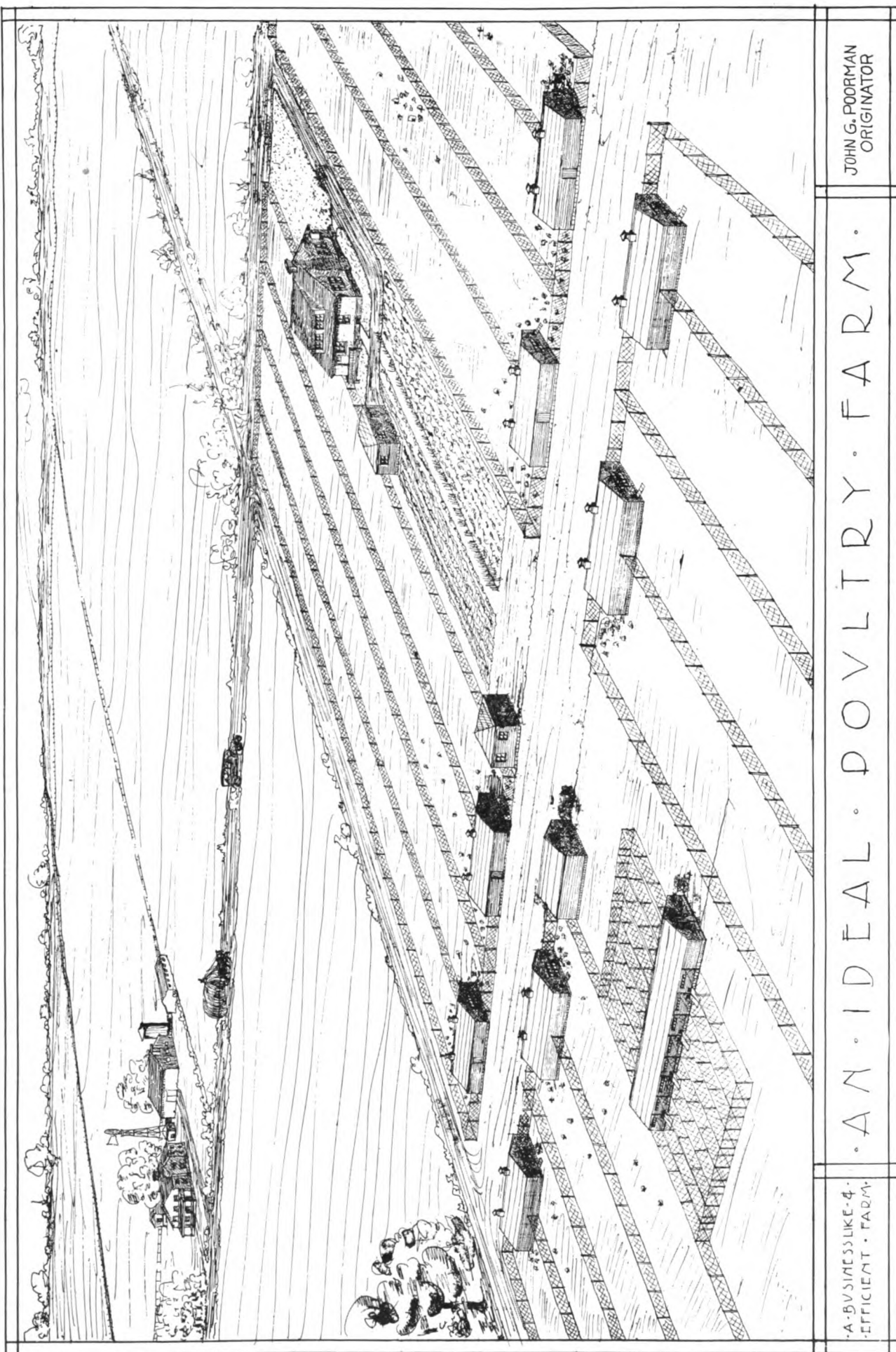
THE instructions herein given will enable you to investigate the poultry business from its practical side, step by step in its entire completeness.

You will be made acquainted with the amount of capital necessary to insure a reasonable amount of success.

You will be called upon to give yourself a very searching examination. Your fitness for this business is a greater determining quality than capital. Capital will put up your buildings; upon your fitness to operate and manage same depends your degree of success.

If you like money better than you do poultry, by all means keep out of the poultry business. It deals with life, and life will not stand neglect and produce a profit.

POORMAN'S POULTRY GUIDE



JOHN G. POORMAN
ORIGINATOR

AN IDEAL POULTRY FARM.

A BUSINESS LIKE-4-
EFFICIENT FARM.

POORMAN'S POULTRY GUIDE AND YOUR EFFORTS WILL ACCOMPLISH THIS

CHAPTER I

The Start

Who Is Best Qualified to Enter the Poultry Business?

No. 1

The immediate answer to the above is very simple—the farmer. He has nearly all of the qualifications necessary, and those he lacks could be readily acquired. The life of the farmer and the life of the poultryman are identical, the rural life. Their working hours are the same, sunrise to sunset. Both industries require constant attention, and perhaps this may apply more to the poultry, which is more exacting than laborious.

No. 2

The progressive farmer has his thoroughbred cows, horses, hogs and sheep properly housed. The value of this stock would not permit of improper houses or neglect in their care or feed. The owner of thoroughbred stock realizes that he has something. He takes care of it and profits thereby. His income is far in advance of the owner who is less particular in what he has and how it is provided for.

No. 3

The day for improving the farm poultry flock is at hand, and when the attention it deserves is granted, it will yield a larger percentage of profit over investment than any live stock on a market return basis. Imagine a manufacturing plant with a steady daily income. On the farm this can only be duplicated by eggs and milk. The milk prices are regulated, and while an absolute necessity and in constant demand, so are eggs, the prices of which are not regulated or controlled only by the demand, which has never been met. A premium for strictly fresh eggs is always offered—any day of the year. It is practical to mail eggs to the consumer every day of the year. This cannot be done with any other farm product.

No. 4

Pin money. At the present time the average farm flock is expected to purchase the groceries, and is often considered the pin-money for the farmer's wife and daughters. To the farmer, chickens are permitted on the farm simply because it would not be complete without a few of them

around. It would be no exaggeration to state that they are considered a pest by the men folks. They have a very small part in the farmer's eye; in fact, they are invisible when a horse, cow or hog is in sight. It is not desired to detract from your interest in farm animals. It is to be hoped that your interest will enlarge sufficiently so as to include the most indefatigable worker on the farm, the hen.

No. 5

Give her a home and attention that compares with her thrift, and your long-neglected and almost forgotten barn-yard friend will bring in the dollars where you only received cents from before.

No. 6

Your son's future. It is getting to be a difficult proposition to provide eighty and one hundred and sixty acre farms for the boys as they grow into manhood. It is a hard matter to keep the boys interested in farm work. Do you realize that on ten acres devoted to poultry your son becomes independent, the revenue accruing therefrom being larger than the average profit of a one hundred and sixty acre farm.

No. 7

Established in business. The unique problem of your boy's future is immediately solved. Assuming that he is sixteen to eighteen years old, and it is your desire and his inclination to give this subject serious thought, a partnership is formed, whereby you put up a Poorman's Standard Poultry House and your son operates same according to instructions that herein follow. The proceeds from the first house are to be used in the erection of the second and others to follow in like manner. In five years' time the poultry plant will be complete, your son's problem solved, his independence established, all at an actual cost to you of a surprisingly low figure.

No. 8

The cost. With the assistance of a carpenter you can erect a Poorman's Standard Poultry House in two weeks' time. The actual cost of

same can be ascertained by taking the Guide to your local lumber yard and an estimate requested on the bill of lumber required as per the specifications. The cost will be no more than any well-made farm building of the same size.

No. 9

Your best source. The only impression that is desired to be conveyed to you is, to start with the one house and follow instructions to the letter. In one year's time you will be convinced of the results. The profits you will make from the one house can be enlarged by additional houses, and no matter to what extent you become engaged in this industry, complications cannot arise, because with my system your operations are the same, if you have one or one hundred houses. In other words, you start in this proposition as a side line only, with one Poorman's Standard Poultry House, and one acre. In five years' time you will be forced to recognize it as your best source of profit, a steady, daily income.

No. 10

Mr. City Man. You have learned from the preceding paragraphs of how readily a farmer can procure a start in the poultry business. With you it is not so simple. You have much to consider, principally, your finances and the change of life. Your investment must be larger, and it is necessary to acquire the land and develop your plant on a maintenance basis in as quick a time as possible, if your resources are limited.

No. 11

Your family can assist. To start this as a side line would mean that you procure a tract of land which would permit you to retain your position in the city until such a time as your plant becomes sufficiently developed and enlarged to be self-supporting. At the beginning your family can be of great assistance in the work. With this arrangement you gradually procure not only a thriving business but a home as well.

No. 12

The start. By carefully laying out your future plant at the beginning you will avoid many unnecessary steps, your buildings will be well arranged in such a manner that will permit of routine work in the quickest time possible.

No. 13

The lay-out, as shown on page eight will give you a good insight of your prospective plant. Select land that is or can be perfectly drained. It is absolutely necessary that drainage can be had for cellars five feet under surface of ground. This is for the purpose of draining the incubator cellars. Buildings Nos. 1, 2, 3, 4, 5, 6, 7 and 8 are Poorman's Standard Poultry Houses. Building No. 9, Special Breeding House. Building No. 10, Granary. Building No. 11, Pump House and Light Plant. Building No. 12, Garage. Building No. 13, Dwelling House. This entire tract of land is ten acres, nine of which are devoted to poultry and one to dwelling and gardens. The granary is centrally located and is within 264 feet of the farthest buildings. Each Poorman's Standard Poultry House is on approximately one acre of land eighteen rods long by eight rods wide. This is divided into two yards, making one yard for each pen in the Poultry House.

No. 14

All buildings must face the south, to permit of sunshine and light. A road running east and west, four rods wide, divides the farm in half. Buildings are to be erected on both sides of the road and for explanatory reasons the buildings on lay-out are numbered. The entrance to buildings on the south side of the road are in the north wall; to those on the north side, in the south wall. All buildings are entered from the road without coming in contact with the poultry. The routine and cleaning is all done through these doors, which are accessible for truck or wagon.

All houses on the south side of the road have eight exits, all of which are used for the young chicks, while confined to the small chick pens. When they become older and run as one flock, only two exits will be necessary. The others remain closed. The position of the doors are plainly shown on drawing on page fifteen.

All houses on the north side of the road, on account of their position, have but two exits—one in the east wall and one in the west wall. Both of these exits must be placed next to the fence.

Be sure that you have this matter of exits in the south and north houses right. The drawings only show the exits for houses that are to be erected on the south side of the road. The same also applies to the main entrances for the attendant. Get this clear.

No. 15

The first house to be built is Number 2 and should be complete, that is, with cellar. The next house, Number 3, and it also should be complete with cellar. These two houses, on account of the incubators in the cellar, will require more of your attention than any of the other buildings, and for that reason they should be located nearest your dwelling. The cellars of the two buildings will give a combined incubator capacity of 16,000 eggs. The next house should be Number 6 or 7 and should also be complete with cellar. This cellar is for storing the green feed for winter consumption, such as cabbage, onions mangel wurzels and carrots. The balance of the houses can follow to suit your convenience and will not require cellars, but they should be built on concrete block foundations.

No. 16

The yards. A Poorman's Standard Poultry House requires one acre for perfect operation. This is to be divided into two yards to correspond with the two pens. The yards must be seeded to grass with a mixture of clover. A low growing clover is preferable; it will spread and be permanent. This sod is green feed and represents quite an item in the feed bill. It means perfect health throughout the spring, summer and fall. Small barren yards are always a source of trouble. Trouble is always an expense.

No. 17

The dimensions of the yards are such that green feed is always plentiful, which affords everything free range can give that is beneficial, and at the same time does away with all the disadvantages of running at large.

No. 18

Shade must be provided. Shade is ideal and if it has to be supplied, do so with fruit trees. Apples, pears and cherries would be the best in the northern states, as they are of longer life than peaches. Around each tree for a radius of five feet the ground should be spaded and kept clear of grass, and worked at intervals as in an orchard. Procure good fruit trees from a reliable nursery. In years to come the fruit therefrom will be quite an item in your yearly income. Fruit and poultry are a good combination, each deriving a great benefit from the other.

No. 19

Does not require plowing. The ground in the yards with dimensions as given will never have to be plowed to renew the surface, which in smaller yards becomes sour and contaminated. The manure will quickly be absorbed by the sod and trees with the assistance of the rainfall.

No. 20

Fencing. A good grade of poultry wire is your best investment. There are plenty on the market, but only a few that are worthy of your attention. The common run of fencing for poultry is made of very light wire, consequently of short duration. A fence of heavy wire is more durable and will last at least ten years. A five-foot wire fence is sufficient for any breed.

The fence post should be of cedar, or, if other lumber, they should be creosoted. There is no objection to steel posts if the wire can be properly fastened to them and held securely in line. For best results a post should be three feet in the ground and eight feet apart. All corner posts should be heavier, ten feet long and set in the ground five feet in concrete. At this depth they will not require bracing.

There should be a gate into each yard from the road, wide enough to permit the entrance of a team, as there may be times when the grass should be mowed.

WATER SYSTEM**No. 21**

Water is very essential and its distribution to the different houses is a problem that must be carefully solved. A lot of time is required each day in performing this chore, and a water system, while expensive, is a very good investment by the time your plant is complete. It would hardly be classed as indispensable at the start; however, modern conveniences cannot be had in the home without it.

The greatest importance is the location of the well. You will again turn to the lay-out on page 8. There is a strip of land 132 feet wide running through the farm from north to south. At the intersection with the east and west road you will note, Pump and Well House. In marking the site for drilling the well make provision for building to go over same, so that it will be possible to line up the south wall with the south walls of all the buildings on the north side of the road.

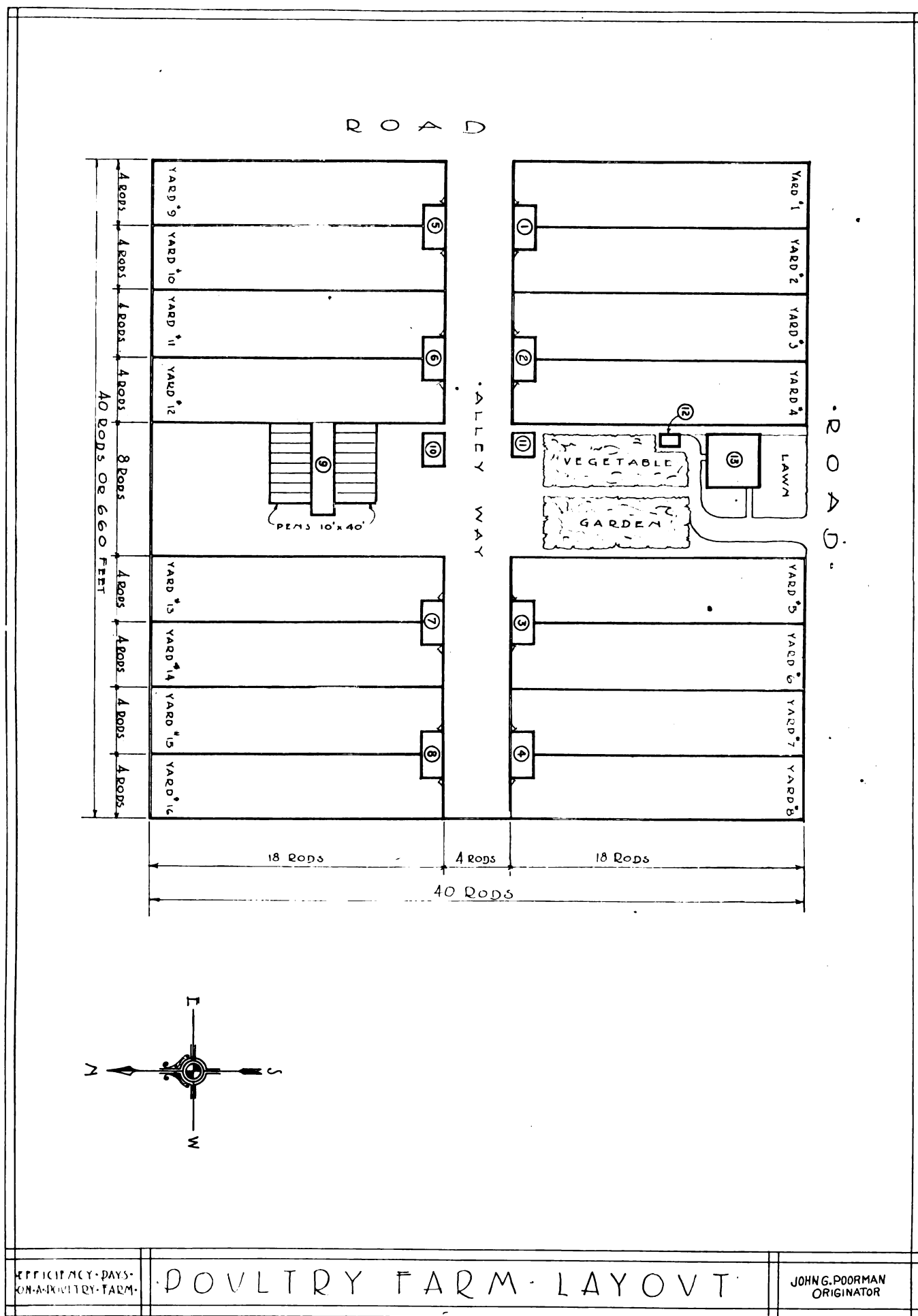
This position is centrally located and is two hundred and ten feet from the doors of Houses Nos. 1, 5, 4 and 8, and will permit of watering in the shortest time possible.

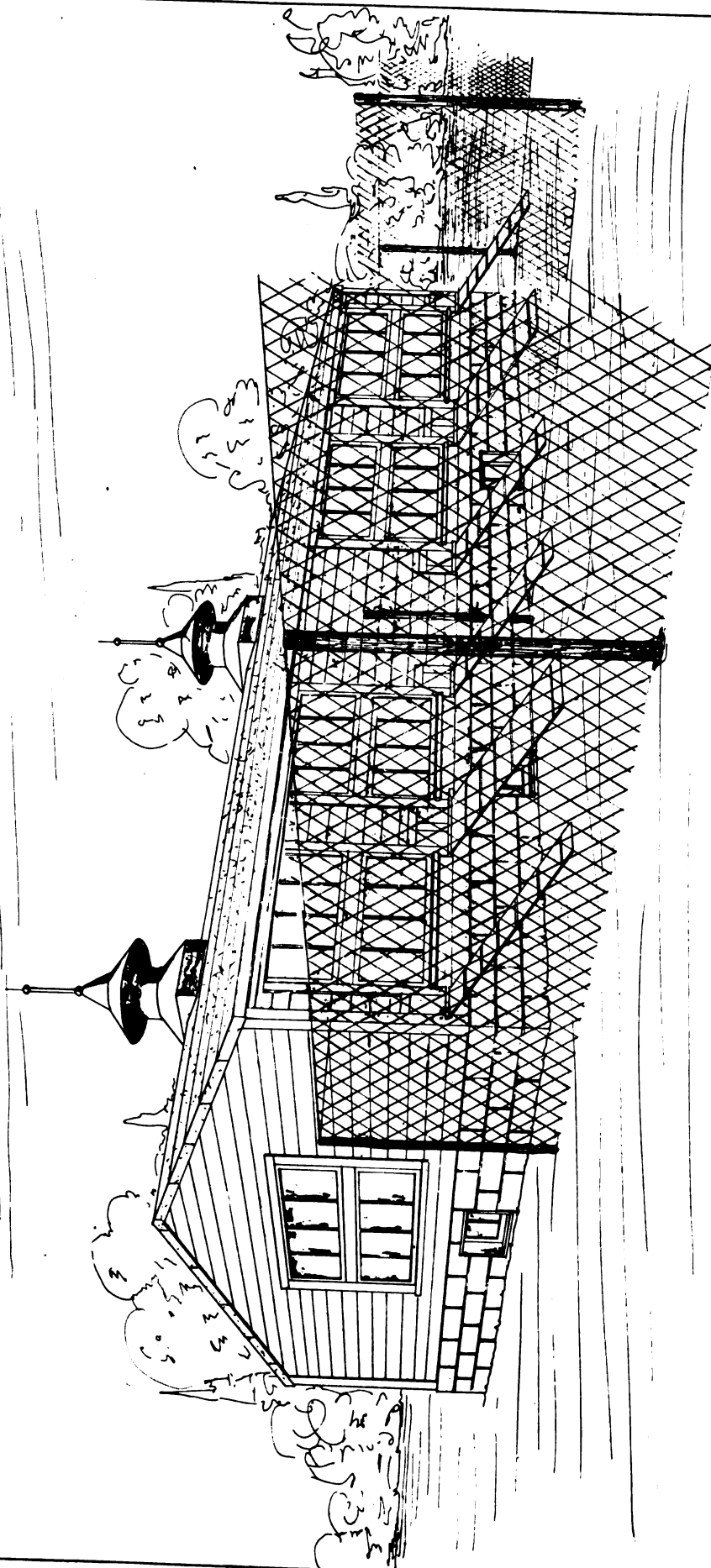
By erecting a house over the well sixteen feet square and eight feet high a water system can be installed. There will also be ample room for a light plant.

No. 22

While your initial intentions may be that you will never have more than the one poultry house, you may ultimately change your plans and erect others. With this in view, select the site of the one building so that others may be erected in line to make your work as light as possible.

POORMAN'S POULTRY GUIDE

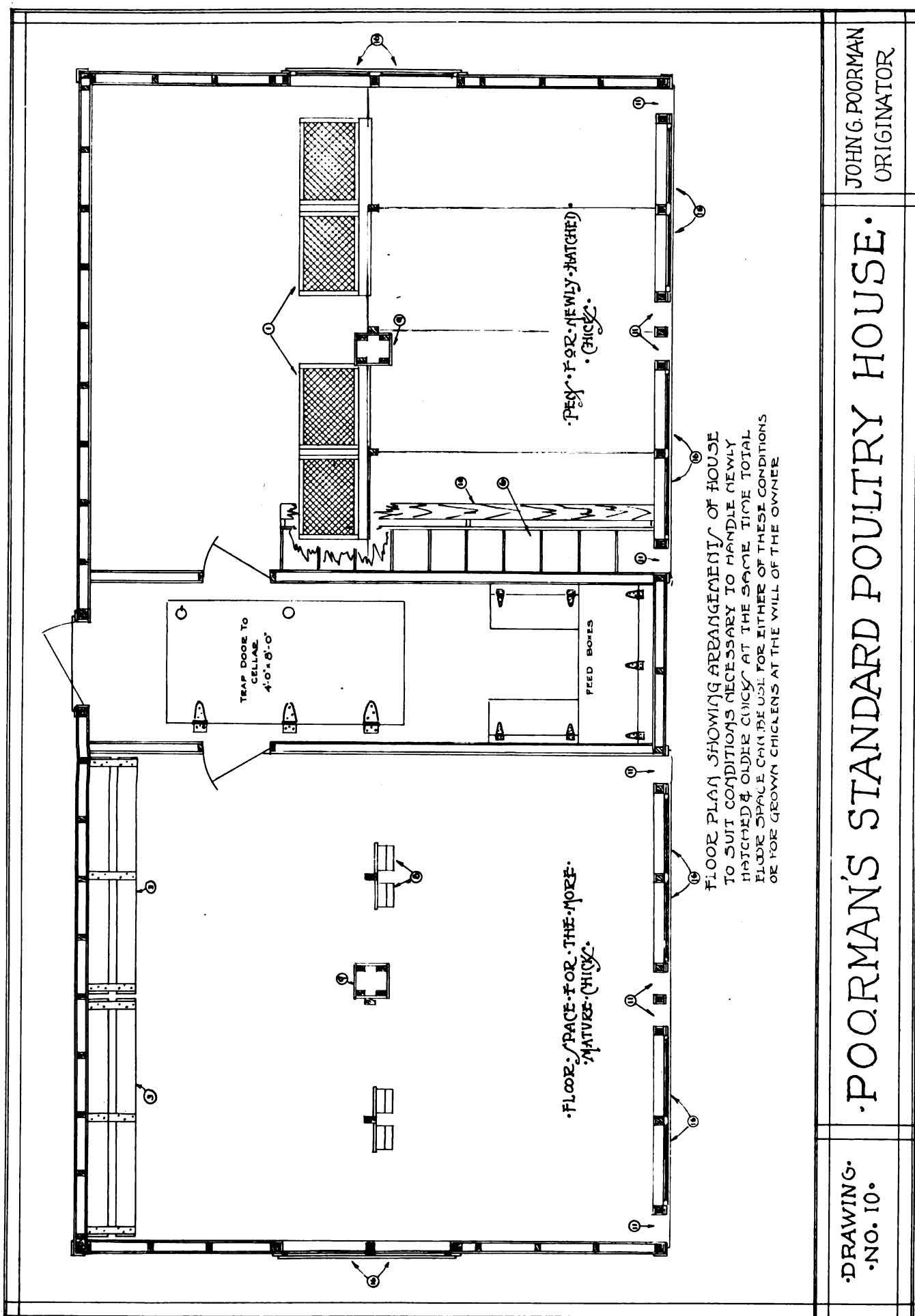




PERSPECTIVE
VIEW

STANDARD POULTRY HOUSE

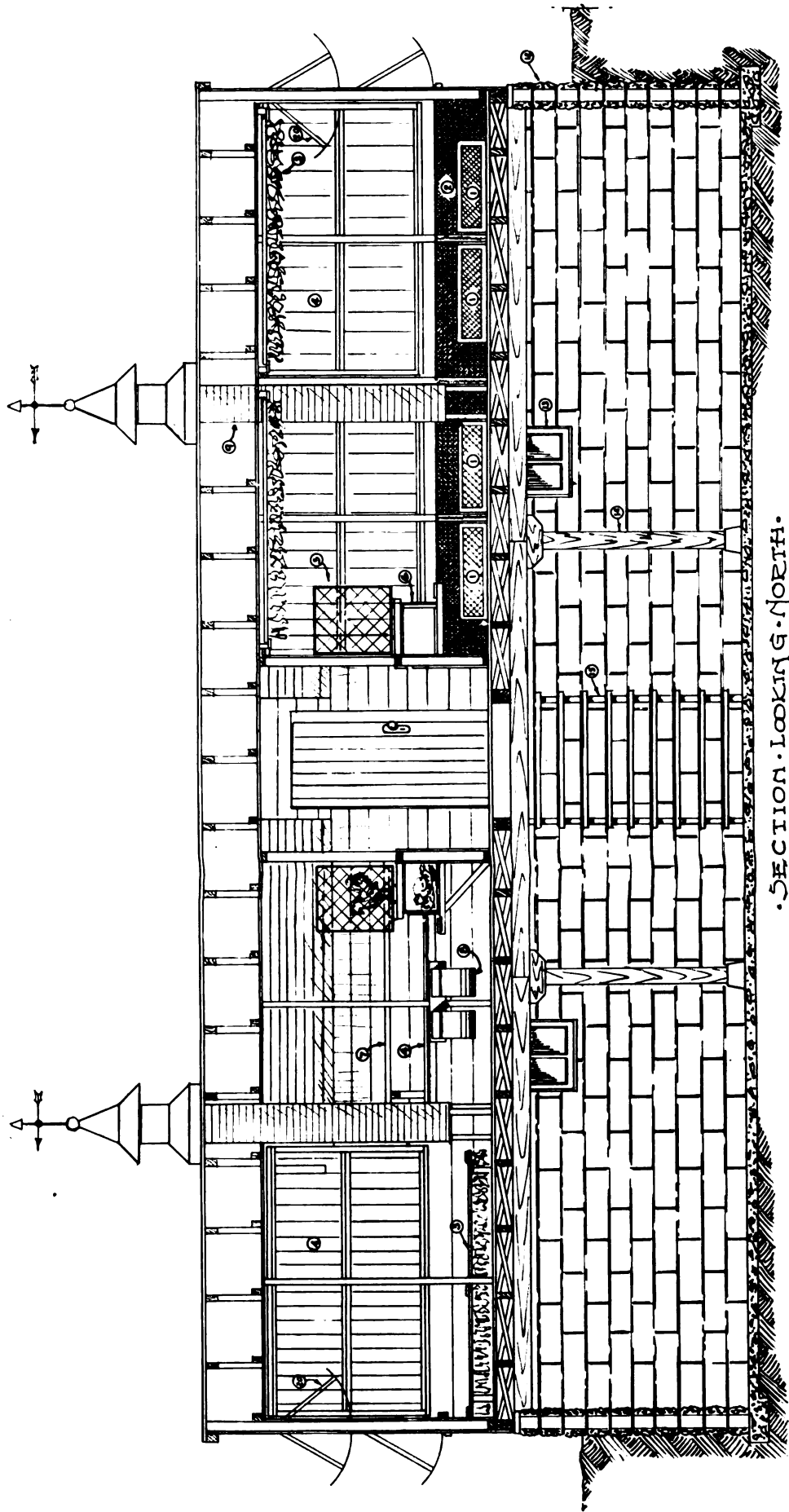
JOHN G. POORMAN
ORIGINATOR



DRAWING
NO. 10

POORMAN'S STANDARD POULTRY HOUSE

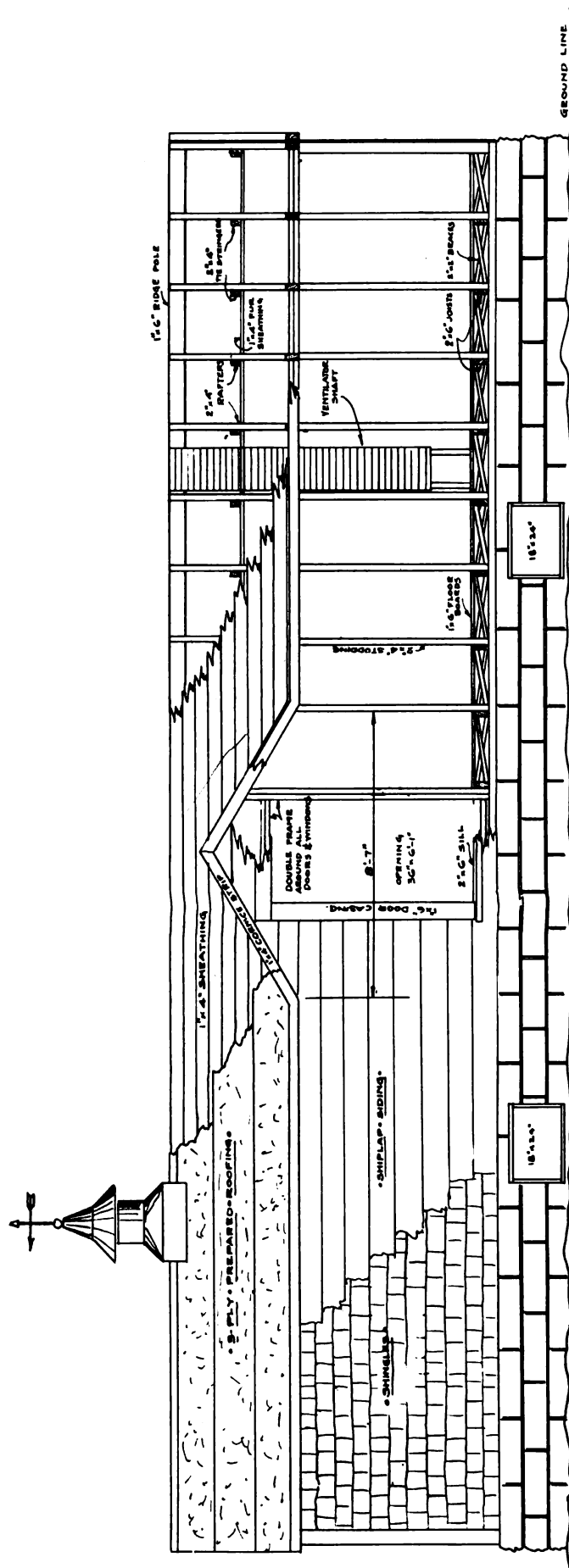
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POORMAN'S STANDARD POULTRY HOUSE

DRAWING
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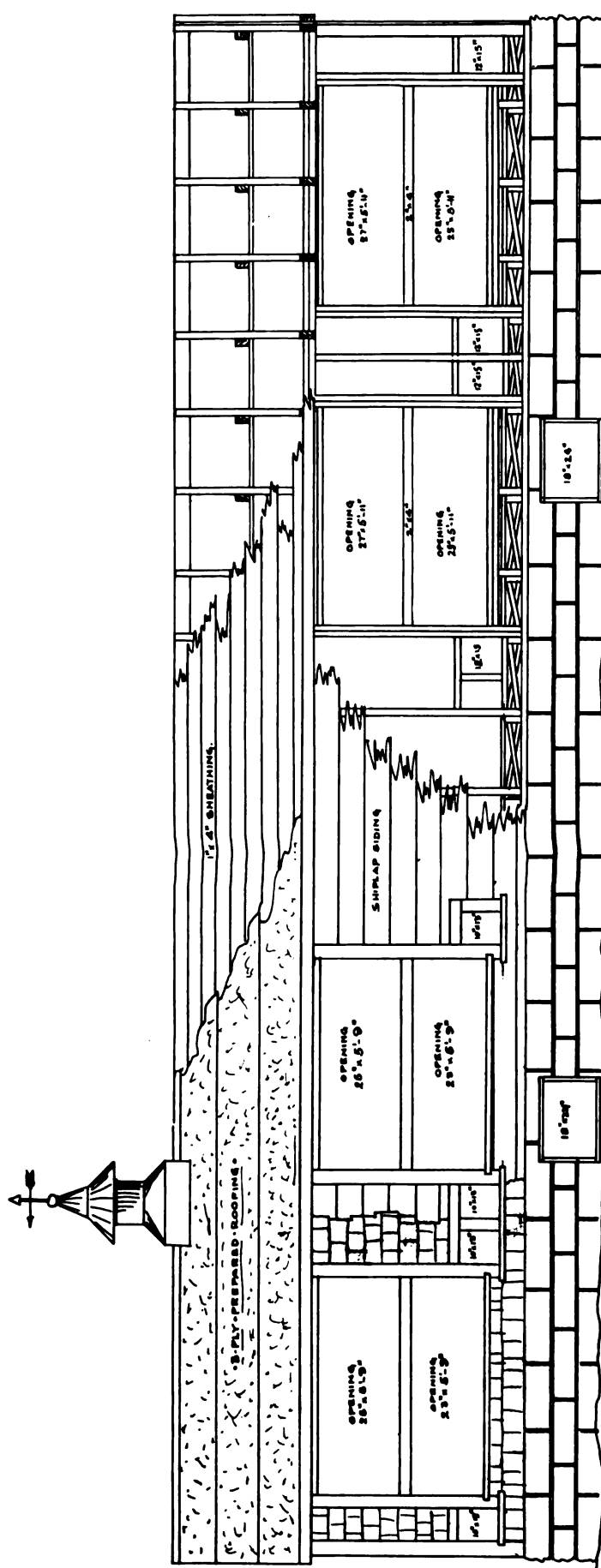


FRAMING DETAILS FOR NORTH
ELEVATION

DRAWING
NO. 11

POORMAN'S STANDARD POULTRY HOUSE

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ORIGINATOR



•FRAMING DETAILS FOR SOUTH•
•ELEVATION•

•DRAWING•
•NO. 12•

•POORMAN'S STANDARD POULTRY HOUSE•

JOHN G. POORMAN
ORIGINATOR

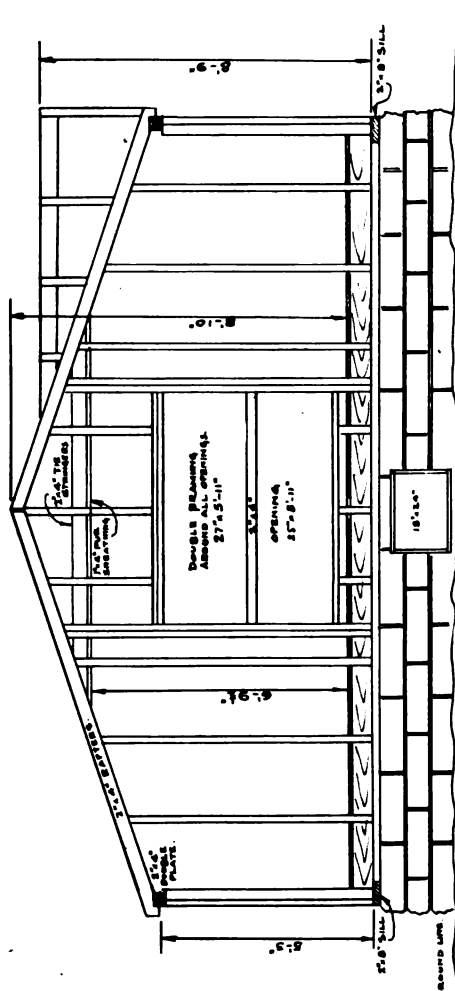
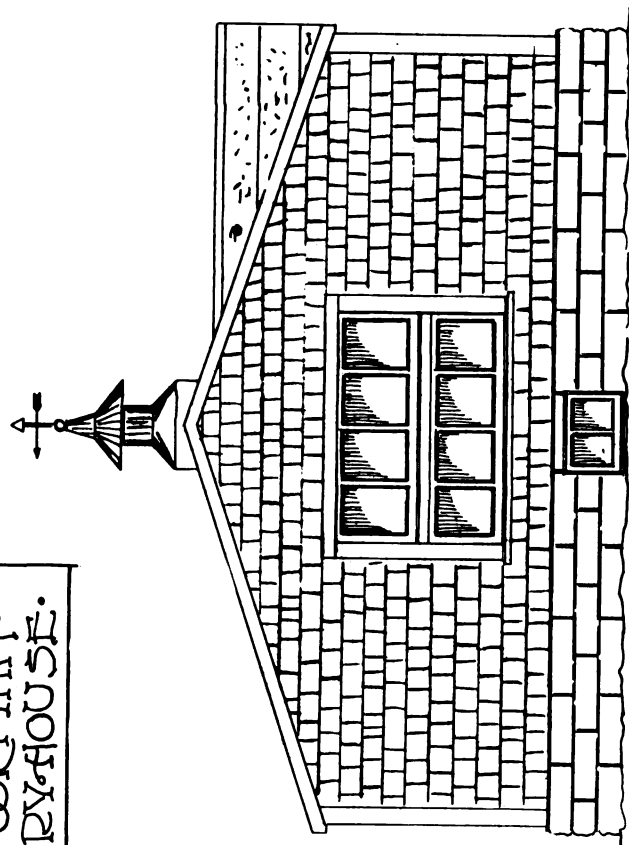
112'-0"

57-10000

OUTSIDE DIMENSIONS: 20'-0" WIDE X 40'-0" LONG
STUDDING, RAFTERS & JOISTS AT 24" CENTERS
CEILING 6'-9 1/2" ABOVE FLOOR
EAVES 4'-8" ABOVE FLOOR

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THE POORMAN.
POULTRY-HOUSE.



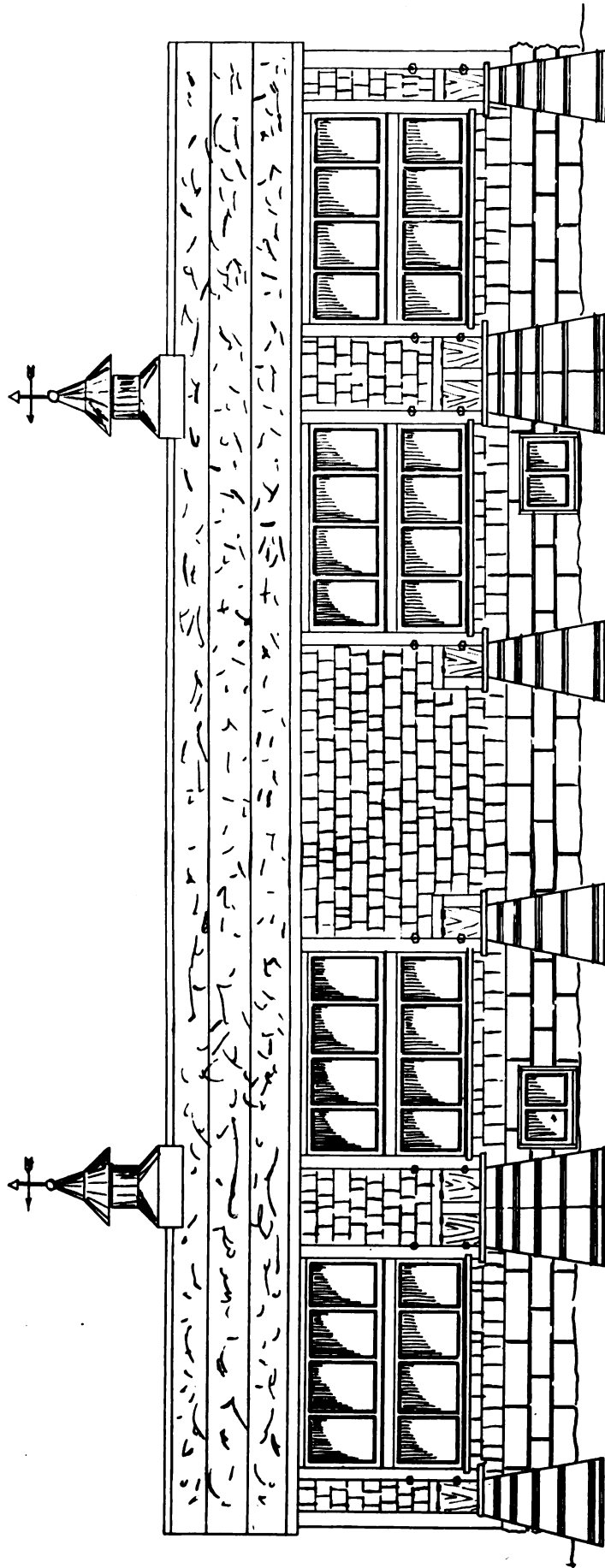
EAST·d·WEST·ELEVATIONS.

FRAMING DETAILS FOR EAST & WEST.
• ELEVATIONS.

·DRAWING·
·NO. 13·

POORMAN'S STANDARD POULTRY HOUSE.

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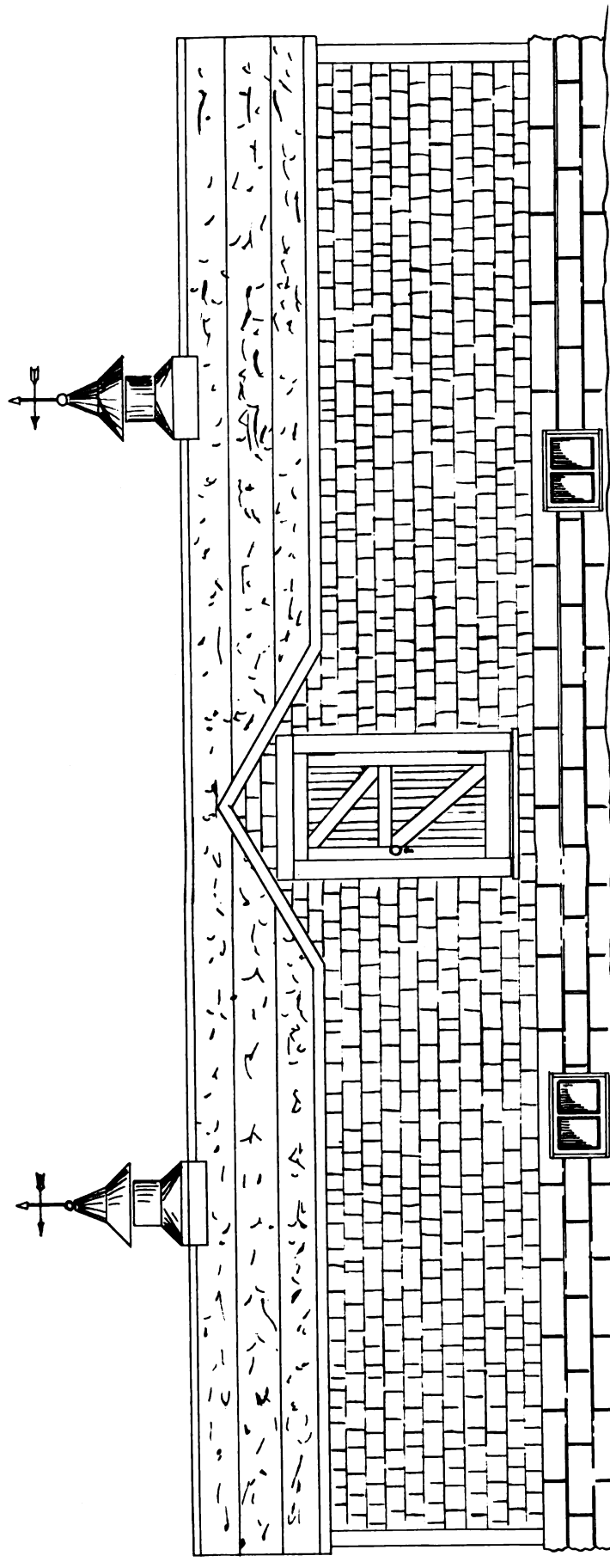


· SOUTH · ELEVATION ·

· DRAWING ·
· NO. 14 ·

· POORMAN'S STANDARD POULTRY HOUSE ·

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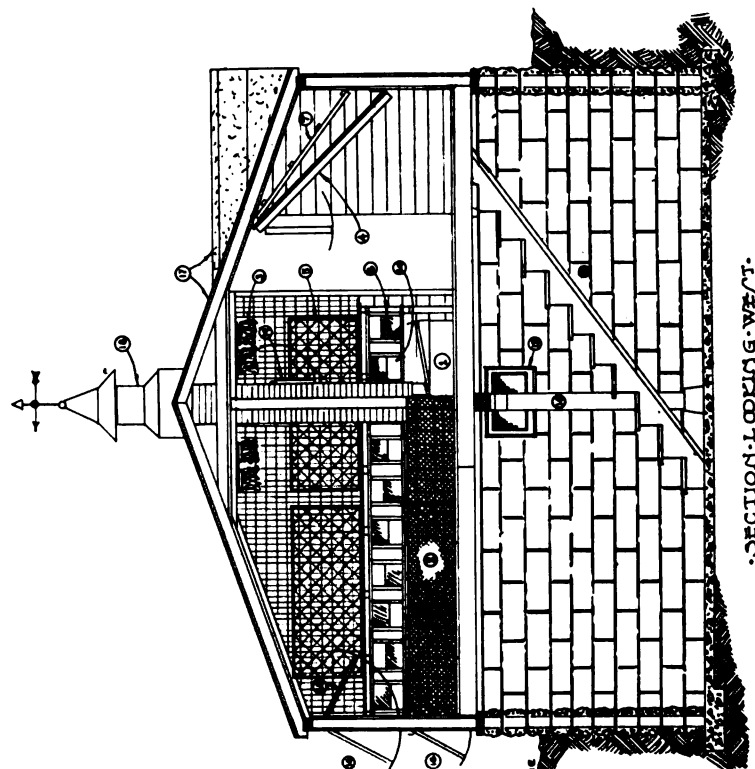
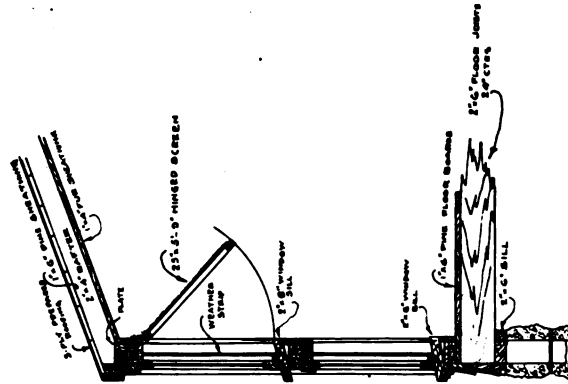
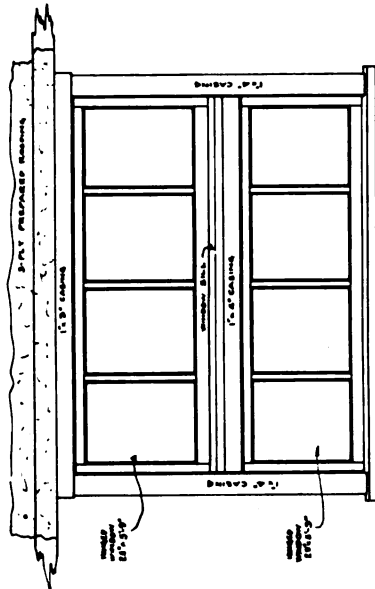
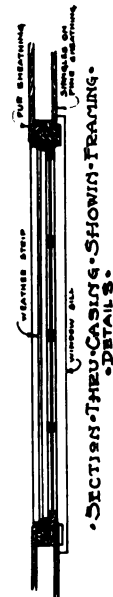
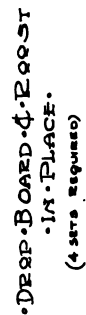
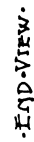
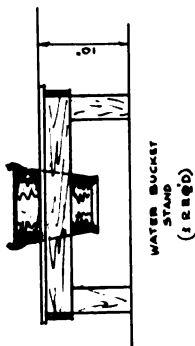
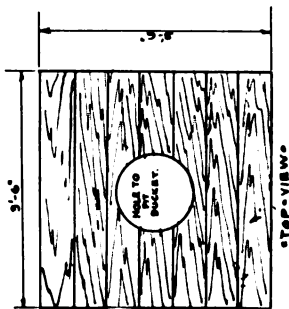
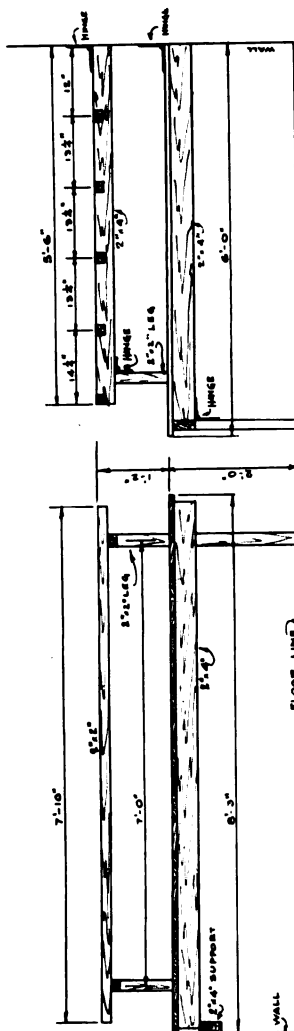


• NORTH • ELEVATION •

• DRAWING •
• NO. 15 •

• POORMAN'S STANDARD • POULTRY HOUSE •

JOHN G. POORMAN
ORIGINATOR



• DRAWING •
• NO. 17 •

POORMAN'S STANDARD POULTRY HOUSE.

JOHN G. POORMAN
ORIGINATOR

CHAPTER II

Buildings

No. 23

Poorman's Standard Poultry House. There has never been, to my knowledge, a poultry house adapted to any or all of the requirements of complete poultry operations that in any way will permit the wide scope of usefulness such as may be accomplished with Poorman's Standard Poultry House.

It is neat in appearance, as you will perceive from the drawing on page 9. It is forty feet long and twenty feet wide, divided into three compartments, two of which are pens seventeen feet wide by twenty feet deep. These are the end compartments. The center compartment is six feet wide and twenty feet deep. It contains feed bins that will hold one month's requirements in feed. The entrance of the building is into this compartment. If you decide to construct an incubator cellar under the house, the entrance into same is through a trapdoor in the center compartment. The entrance into either pen is gained from the center compartment.

On page 10 is the floor plan of the house. The pen on the left shows two two-compartment feather brooders with four temporary pens extending to the south windows, each four feet wide by ten feet long. The partitions of the pens are 1 by 12 by 10 planks. This provides a runway for each seventy-five chicks with a total number of 300 chicks for the four pens and 600 chicks for the entire house. These small runways are ample for chicks up to five weeks old. Small runways must be provided out of doors, so that the chicks may be out when the weather will permit. Four feet wide and sixteen feet long for the out of door runways is plenty. On page 15 you will note the platforms extending to the ground from the eight exits. Make a runway for each platform. Please note that the chicks up to five weeks old only use the south half of the large pen.

The pen on the right shows all temporary pens removed and the feather boards attached to the north wall. At five weeks old the chicks need more room and the 300 are given the entire pen and at this age are taken care of as a unit. The small out door runways are removed and each 300 chicks have one-half acre to range in.

The chicks must have a temperature of seventy to seventy-five degrees to develop in. To accomplish this heat must be provided, and this can be done by placing a stove or boiler in the center compartment of the building. If there is a cellar under the building place the stove or boiler there.

As the chicks develop they out-grow the brooder and desire to roost. Turn to page 17 and note the drawing in the lower lefthand corner. No. 4 are the drop boards fastened to the ceiling. No. 7 are the roosts, also fastened to the ceiling. They are both hinged to the north wall. These are now let down in their proper position, as shown in the two views in the upper right-hand corner of drawing on page 17. You can plainly see how simple

the brooder house becomes a colony house. As the chicks develop, the cockerels are removed and the pullets remain. This is explained in other parts of the Guide. As the pullets develop the nests are ready for egg production. What was once a brooder house, then a colony house, becomes a laying house. You will note the nests on the drawing in the lower left-hand corner on page 17. They are designated by No. 6. They are trap nests, but can be transformed into ordinary nests by removing the slides.

No. 24

Trap-nests. The drawing on page 18 refers to the making of the trap-nests. The gate, or slide, works up and down and is held in position by cleats. A four-inch hook holds the gate in position when raised and in this position is ready for the hen to enter. In entering the hen raises the gate with her back, which releases the hook. As the hen completes her entrance there is nothing to hold the gate and it falls to its lowered position and the inmate is trapped and remains so until liberated by the attendant. You will find all dimensions for making the nests complete in this drawing.

No. 25

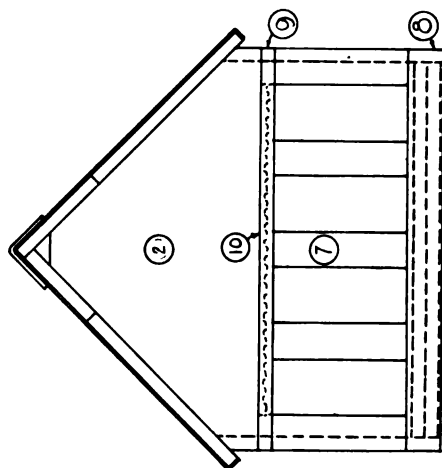
The cost. This is an ideal poultry house for the farm and will demonstrate to the farmer what can be accomplished with poultry. It will pay for itself in one season. By taking the Guide to your local lumber dealer he can advise you of the cost of material. At the time my houses were built the lumber totaled around \$280.00 per house. I do not hesitate to state that you will find much larger returns on poultry properly handled, for amount of capital invested, than it is possible to procure from any of the branches of farming. Give this house and my methods one year's trial and become convinced.

No. 26

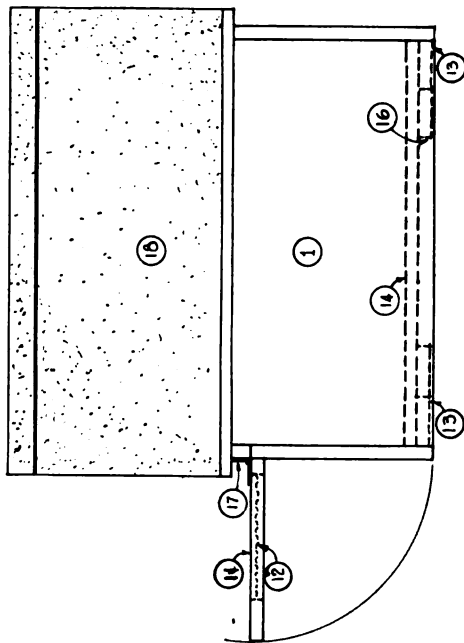
On a large scale. In extensive operations the use of the house simplifies matters. The work is no more complicated than that of taking care of one house. The operation is merely multiplied by the number of houses. An accident or a sickness would be confined to the house in which it occurred. The other houses would be exempt.

No. 27

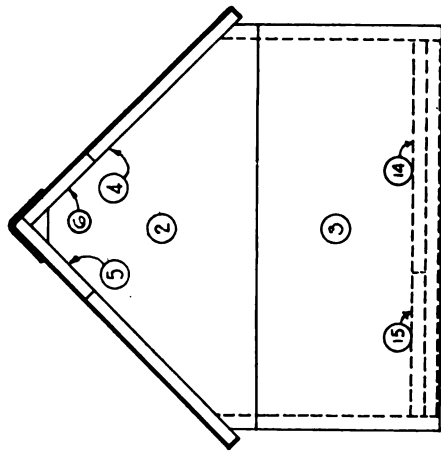
Location. In the northern states the house would be erected as specified in the Guide. In the southern states it would not be necessary to ceil the house to obtain the necessary warmth. However, the yarding and other matters would be identical.



FRONT END VIEW



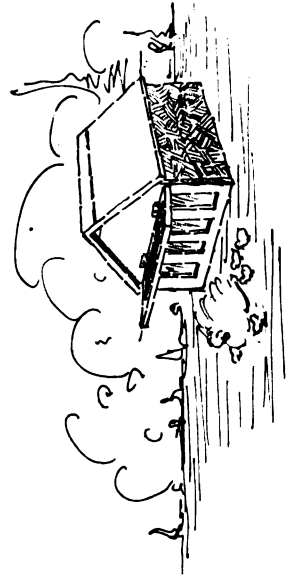
SIDE VIEW



REAR END VIEW

BILL OF MATERIAL

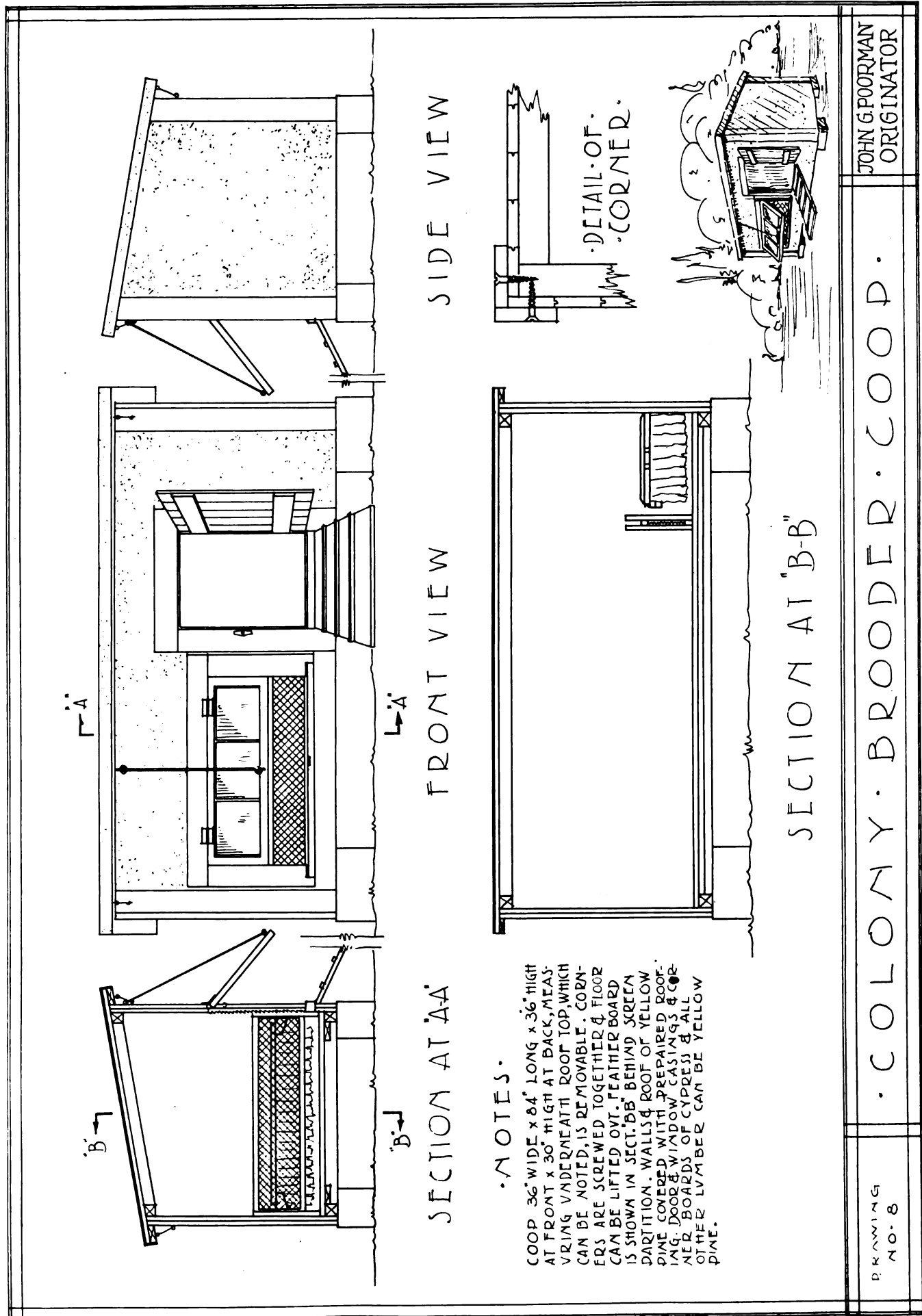
① 2 PCS. 1x12x25½'	WHITE PINE FOR SIDES	⑩ 2 PCS. 1½x2x22½'	CYPRESS FOR SCREEN FRAME	
② 2 "	1x12x22½'	⑪ 2 "	1½x2x6½'	
③ 1 "	1x10½x22½'	⑫ 1 "	1x12x22½'	WIRE SCREEN CLOTH
④ 2 "	1x12x26"	⑬ 2 "	1½x3x21'	CYPRESS FLOOR SUPPORTS
⑤ 1 "	1x6x26"	⑭ 1 "	1x12x22½'	WHITE PINE FLOOR BOARD
⑥ 1 "	1x5x26"	⑮ 1 "	1x9x22½'	"
⑦ 5 "	1½x2x7½'	⑯ 2 "	1x5x21'	"
⑧ 1 "	1½x2x22½'	⑰ 2 "	STEEL HINGES WITH SCREWS	
⑨ 1 "	1½x18x22½'	⑱ 8 "	SQUARE FEET PREPARED ROOFING	



DRAWING-
NO 7.

BROODER-COOD FOR HEN WITH CHICKS.

JOHN G. POORMAN
ORIGINATOR



No. 28

Brooder coop for hen with chicks. The drawing on page 20 gives an ideal brood coop for small operations confined to either the farm, where but a small number of chicks are produced, and also for the back-lotter. The coop is so made that the floor can be removed for cleaning and in so doing every part of the interior is exposed for a thorough cleaning. The door is covered with quarter-inch wire mesh and when closed at night is secure from danger without. When the door is open in the day time a wooden frame is inserted, which confines the hen and permits the chicks to go back and forth at will. When it is desired to have the hen go with the chicks the wooden frame is removed.

The cost of material to make one coop is in the neighborhood of \$2.00, and when completed is far superior to any you can buy. Don't use barrels or boxes. They never are secure and will be a haven for mites which will infest the chicks and make their lives miserable. You will not find any pleasure in these crude makeshifts.

No. 29

Colony Brood Coop. On page 21 you will find plans for the construction of a colony brood coop with feather board to accommodate 50 chicks. This is a splendid out-door brood coop for practical use in the late spring and summer. It is made in sections, the four walls, floor and roof each being a section. The floor rests on cleats attached to the walls. The roof is held to the walls with four hooks and eyes. The four walls are held together with screws. By releasing the hooks the roof can be removed and through this opening the floor can

be removed. Every part of the coop is exposed for thorough cleaning and disinfecting. The inside window opening is covered with quarter-inch wire mesh. This makes it possible to close the door at night and still have plenty of ventilation, plus security.

The cost of material for the coop should not exceed \$10.00. It is not difficult to make and with the use of the feather board instead of a lamp the danger to property from fire is removed. The same care and attention is required in taking care of the chicks as if they were indoors. The weather conditions will govern when it is advisable to start rearing them. In the southern states this would be much earlier than farther north. If it is your decision to use a number of these coops I would advise giving each a yard fifty by fifty on a grass run and if possible with shade. If yards are smaller green feed will have to be supplied daily. You will note that the house sets off the ground on concrete blocks (eight inches). This will provide shade as well as shelter from rain.

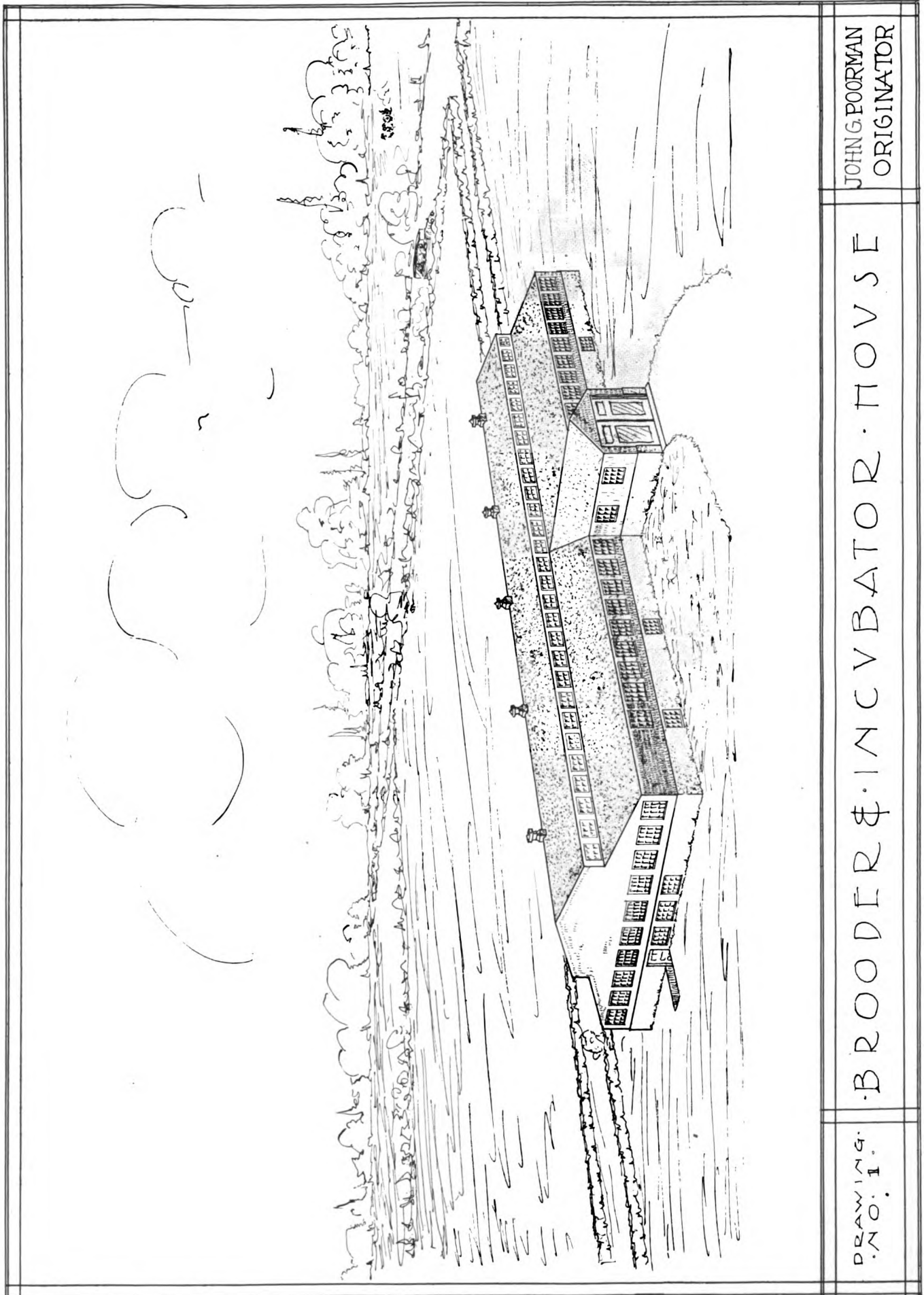
For raising a few hundred chicks at a small outlay of capital I know of nothing better than this colony coop. When the chicks reach the broiler age it becomes necessary to dispose of some of them to make room for the remainder. The male birds should be disposed of as broilers, and then the pullets that do not show to the best advantage.

This would give the back-lotter an opportunity for broilers through the summer and fall and some choice pullets for winter layers. At the same time it could be conducted successfully on a large scale and when the pullets are three to four months old transfer them to the laying house.

Follow the instructions for care and feeding as given under Artificial Brooding of Chicks described in another part of the Guide.



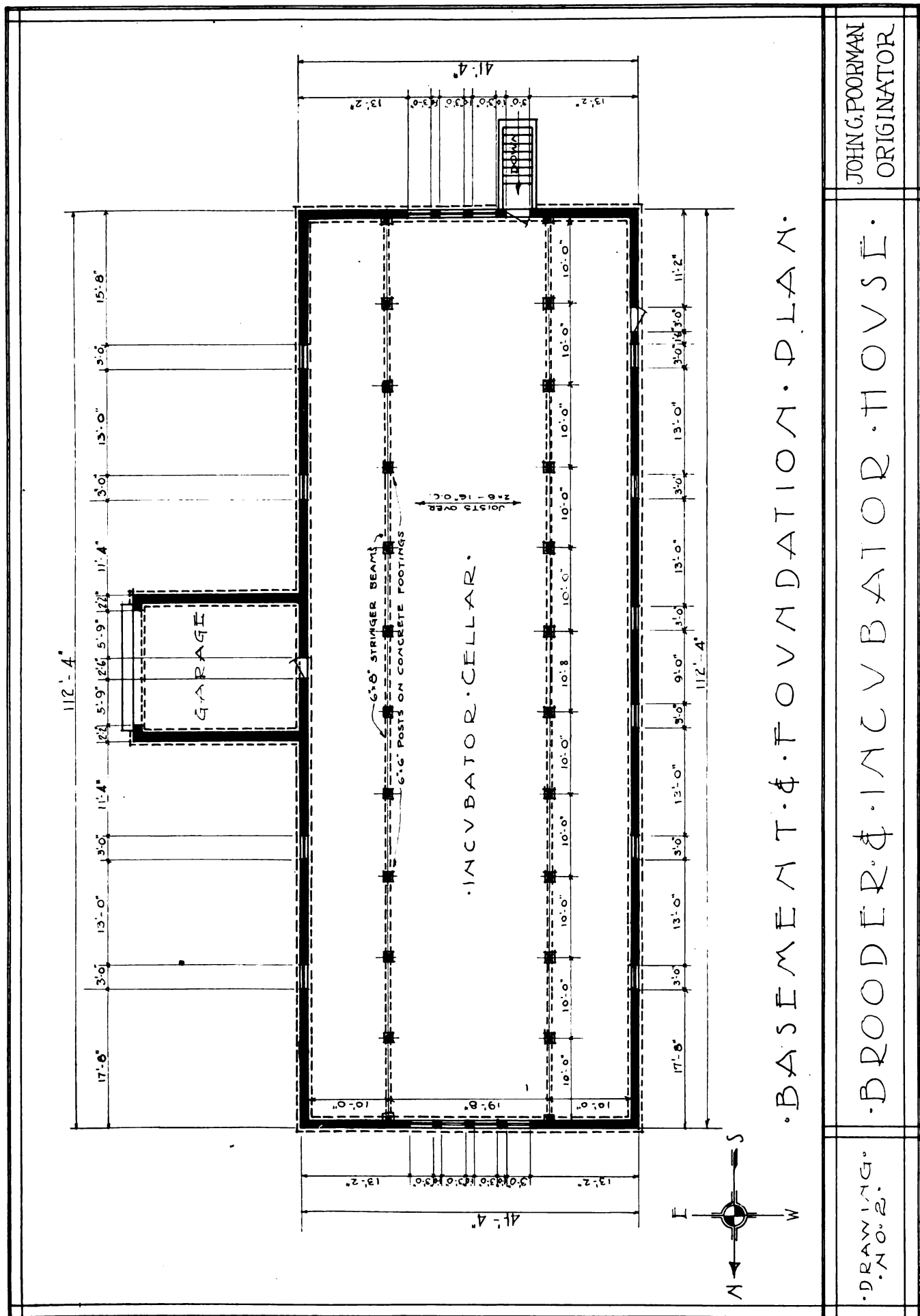
A PEN OF BRED-TO-LAY WHITE ORPINGTONS



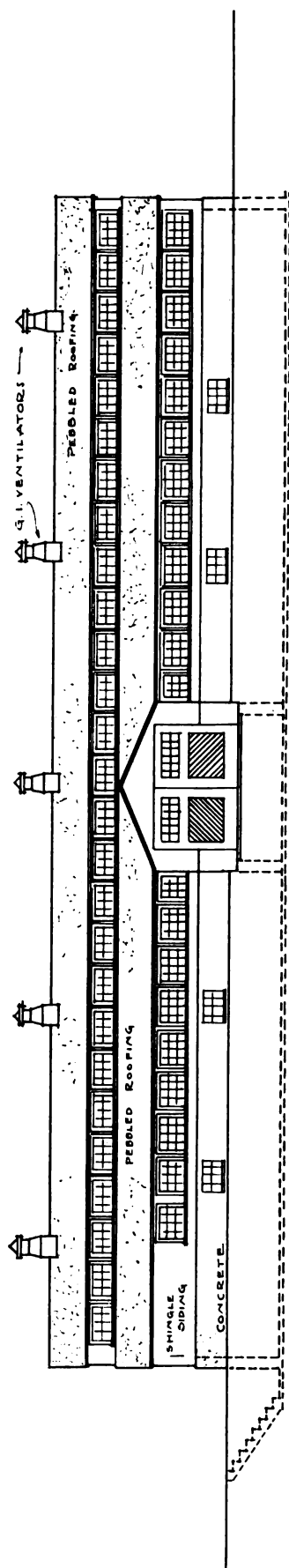
JOHN G. POORMAN
ORIGINATOR

BROODER & INCUBATOR HOUSE

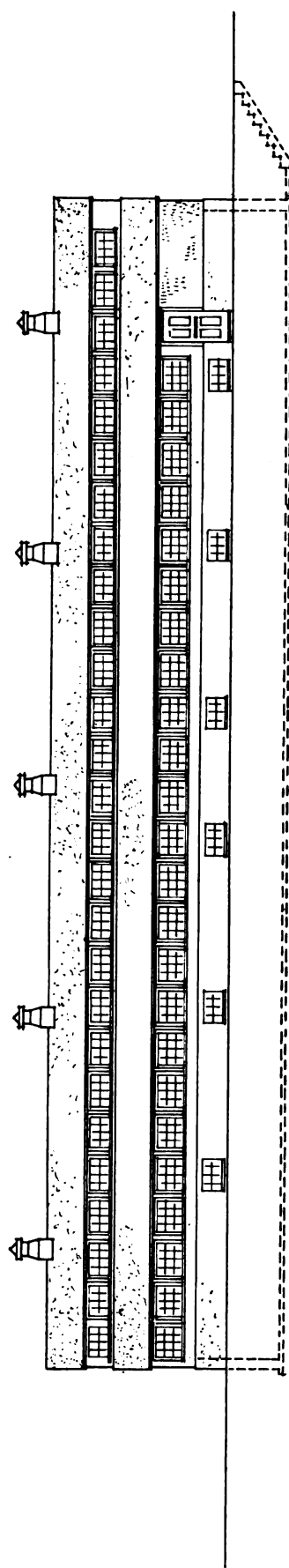
DRAWING
NO. 1.







EAST ELEVATION



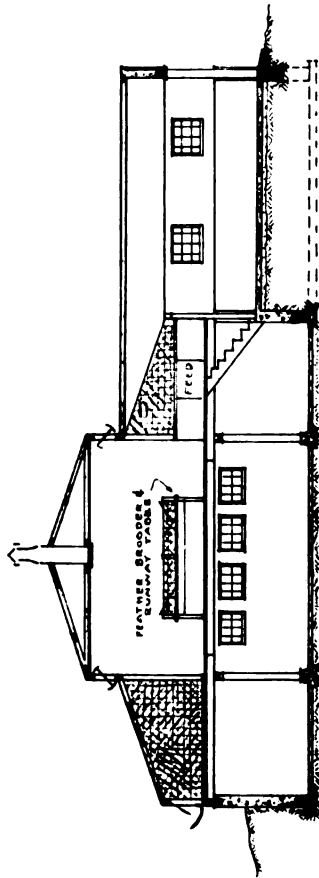
WEST ELEVATION

DRAWING
NO 4

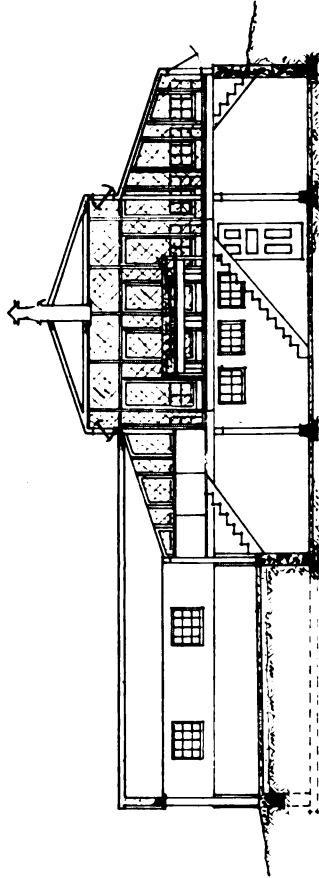
BROODER & INCUBATOR HOUSE

JOHN G. POORMAN
ORIGINATOR

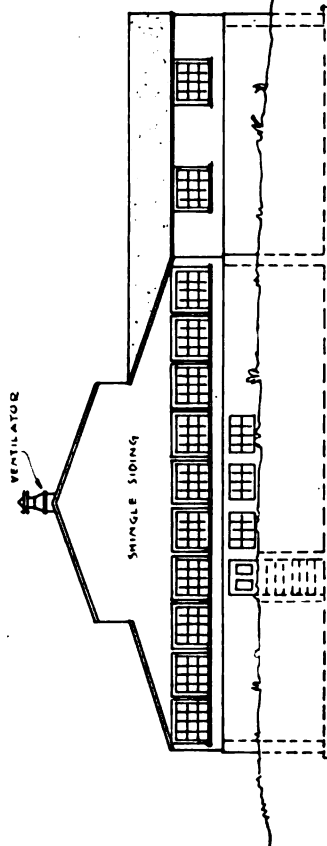
NOTE: BUILDING SHEATHED
INSIDE



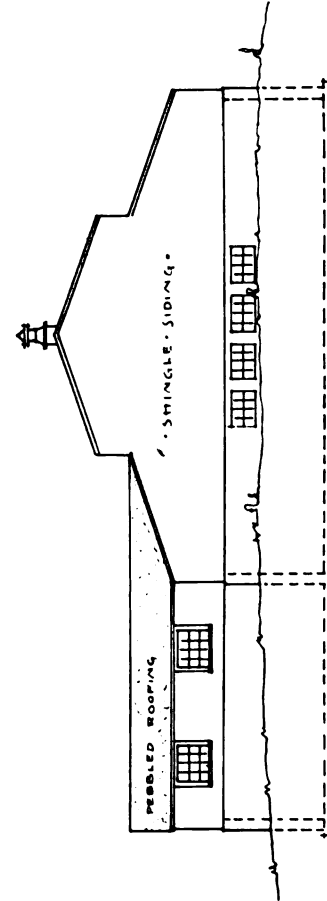
SECTION · LOOKING · NORTH ·



SECTION · LOOKING · SOUTH ·



SOUTH · ELEVATION ·

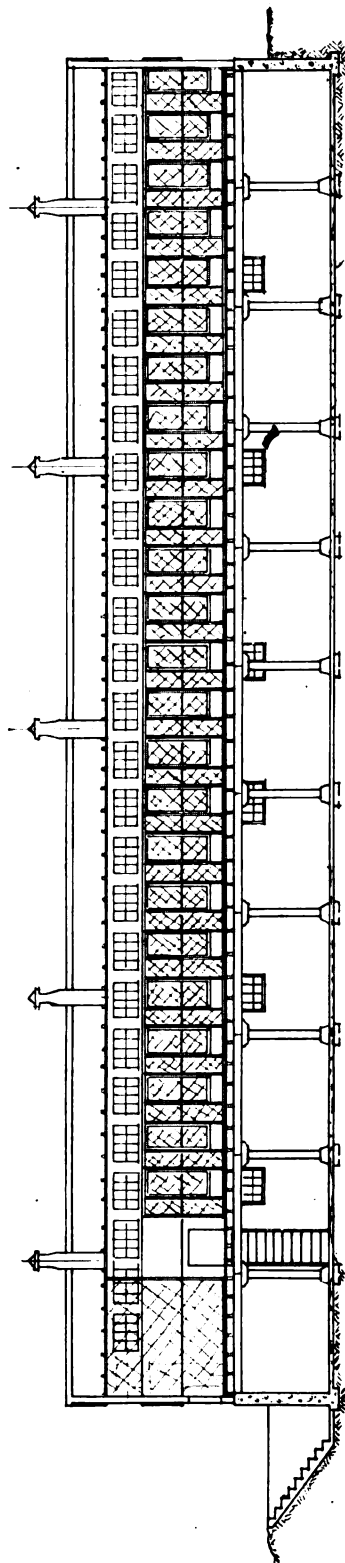


NORTH · ELEVATION ·

DRAWING
NO. 5.

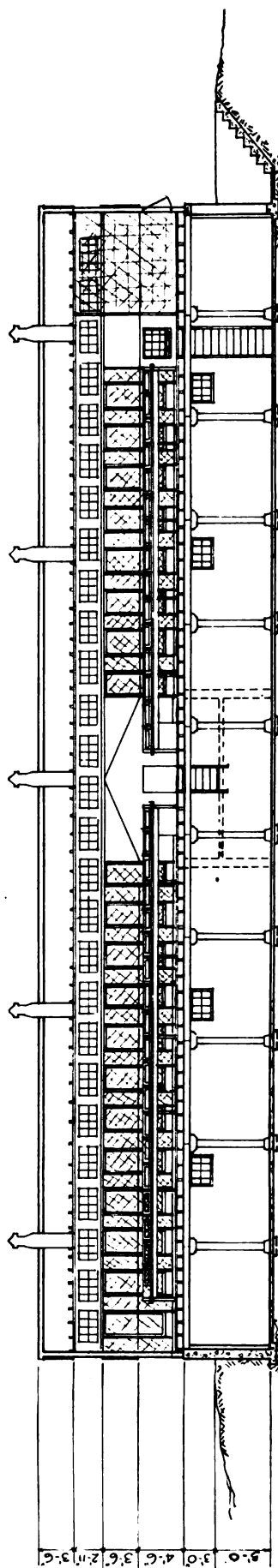
BROODER & INCUBATOR HOUSE

JOHN G. POORMAN
ORIGINATOR



SECTION LOOKING WEST

BROODER TABLE PENS NOT SHOWN TO GIVE
BETTER VIEW OF PENS



SECTION LOOKING EAST

DRAWING
NO. 6.

BROODER & INCUBATOR HOUSE.

JOHN G. POORMAN
ORIGINATOR

No. 30

Brooder and Incubator House. The drawings appearing on pages 23 to 28 inclusive covers brooding and hatching on a large scale. The house is one hundred and twelve feet long by forty feet wide. In the center is an extension which is used as shipping room and garage.

The cellar is under the entire house with the exception of the garage, which is on the ground floor. It is a roomy cellar with an eight foot ceiling. It will accommodate incubators with a total capacity of 40,000 eggs. With some makes of incubators it would total a much larger capacity, but this cannot be accomplished without producing inferior chicks. An incubator cellar should not be crowded with double deck machines or other makes of a congestive principle. Eggs during incubation require a certain amount of air, not artificially fanned air, but good, healthy, natural air. Therefore permit plenty of air into the cellar, be satisfied with a smaller capacity and produce chicks of the first quality.

The floor should be cement. It is sanitary. It will permit of continual flushing, which cools and moistens the air, so essential to good hatches in warm weather.

The Boiler. The heat required by the brooder house above is supplied by a hot-water system in the center of the incubator cellar. This system is of sufficient radiation to heat the brooder room to a temperature of seventy-five degrees.

The brooder room is divided into small pens making a total capacity of 10,000 chicks until one month old. This is a very fine arrangement for conducting a baby-chick business selling the chicks to parties preferring them one, two, three and four weeks old instead of the day-old. Chicks at

the above ages cannot be shipped with the exception of the day-old chick, which does not require food for two days after hatching. Any trade on growing chicks, that is at one, two, three and four weeks old will have to be confined to your immediate neighborhood.

There are no outside runways from this brooder house and for the further advancement of chicks it becomes necessary to transfer them to small colony coops with yards as described in No. 29.

No. 31

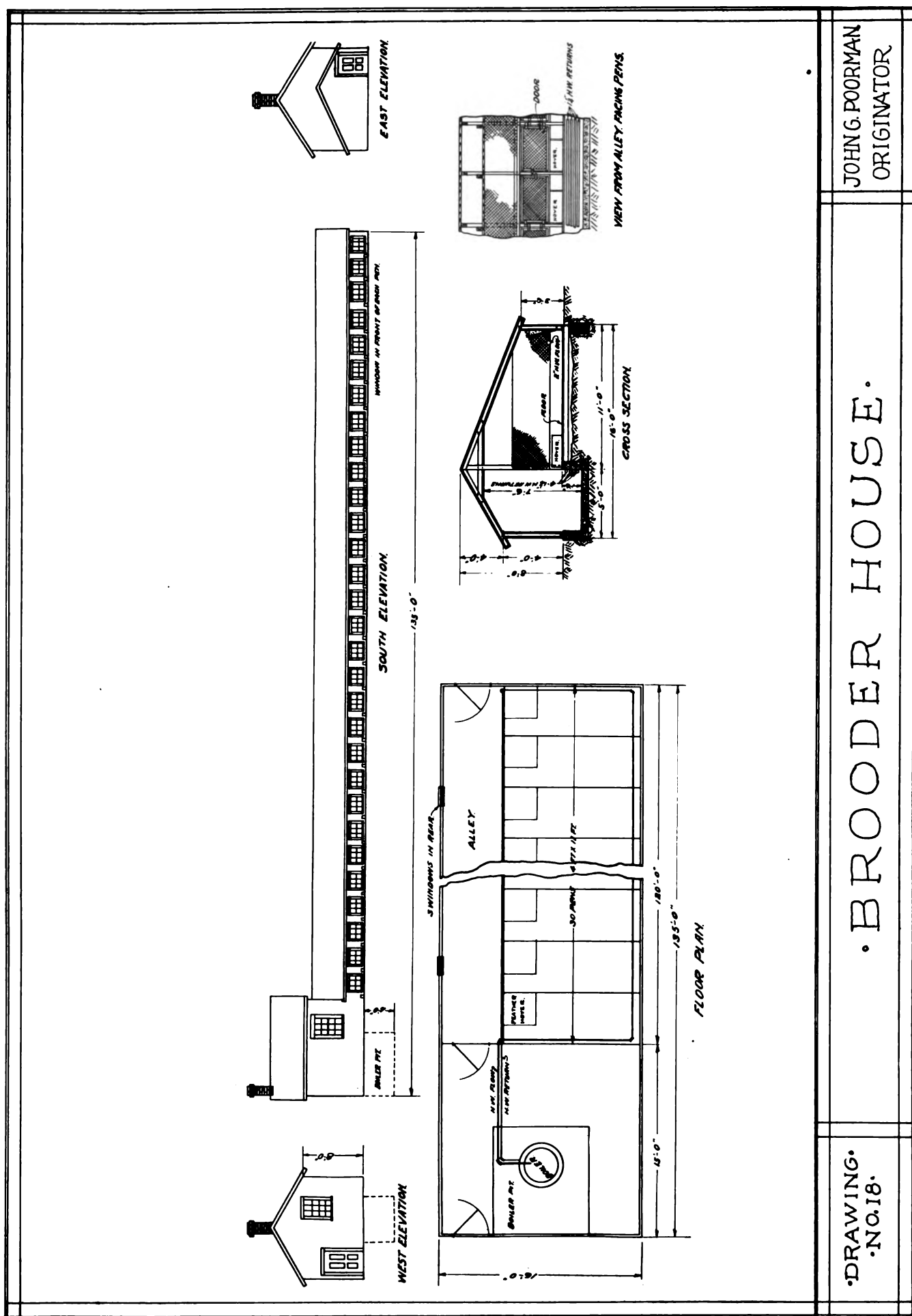
A Brooder House. On page 30 is a drawing of a brooder house of the old type. It is on the ground level and permits of runways outside which makes it serviceable for chicks up to six weeks old. The house as drawn has 30 pens with a capacity of 75 chicks per pen. This style of brooder can be added to without any change in its makeup. It can be of four, five or six pens or of any number up to thirty pens. The fifteen foot room to the left is for boiler, coal-bin, feed and supplies.

Comparison. The houses described in No. 30 and No. 31 are quite limited in their uses and are utilized only four months of the year. They are as implied, brooder houses. Compare these with a Poorman's Standard Poultry House and you will realize the great difference in poultry house construction. The brooder houses are idle eight months of the year. The Poorman's Standard Poultry House is in practical use every day of the year; it is in constant use. It excels as an incubator cellar, a brooder house, a developing house and a laying house. There is no type of house of any origin that in any way can serve, and always to the best advantage the different requirements of the poultry industry. When constructed on an acre of land, it becomes a complete poultry farm.



AIRDALE TERRIER

The best night watchman on a poultry farm



JOHN G. POORMAN
ORIGINATOR

• BROODER HOUSE •

• DRAWING •
• NO. 18 •

No. 32

Special Breeding House. On pages 32 to 37 inclusive you will note drawings that cover the construction of a Special Breeding House. It is a house divided into many small pens to accommodate select or special matings. It permits of the continuation of the good work that is only brought to light by the trap-nest.

We find by trap-nesting the individual records of the hens. Individual matings are indulged in to perpetuate the blood-lines of an established layer. She is mated to a son of an established layer. The two birds are not related. In their offspring is established a distinct blood line. Other pairs are mated, their offspring establishing another distinct blood line. Their offspring are intermated without inbreeding. These are matings of actualities and not imaginary possibilities.

To carry on these matings it is very convenient to have a specially constructed building to house them.

An alley with track runs lengthwise through the center dividing the building into south and north halves. These in turn are divided into pens with entrance, nests, and drop-boards all conveniently arranged for operation from the alley-way.

The drawing on page 32 gives a perspective view, showing the yards extending to the south

and north of the house. The skylight windows are for sunlight for the north pens.

On page 34 you will note window construction. They are the same size as used in a Poorman's Standard Poultry House. The windows in the north wall are small and are for the purpose of ventilation in hot weather. They remain open all summer.

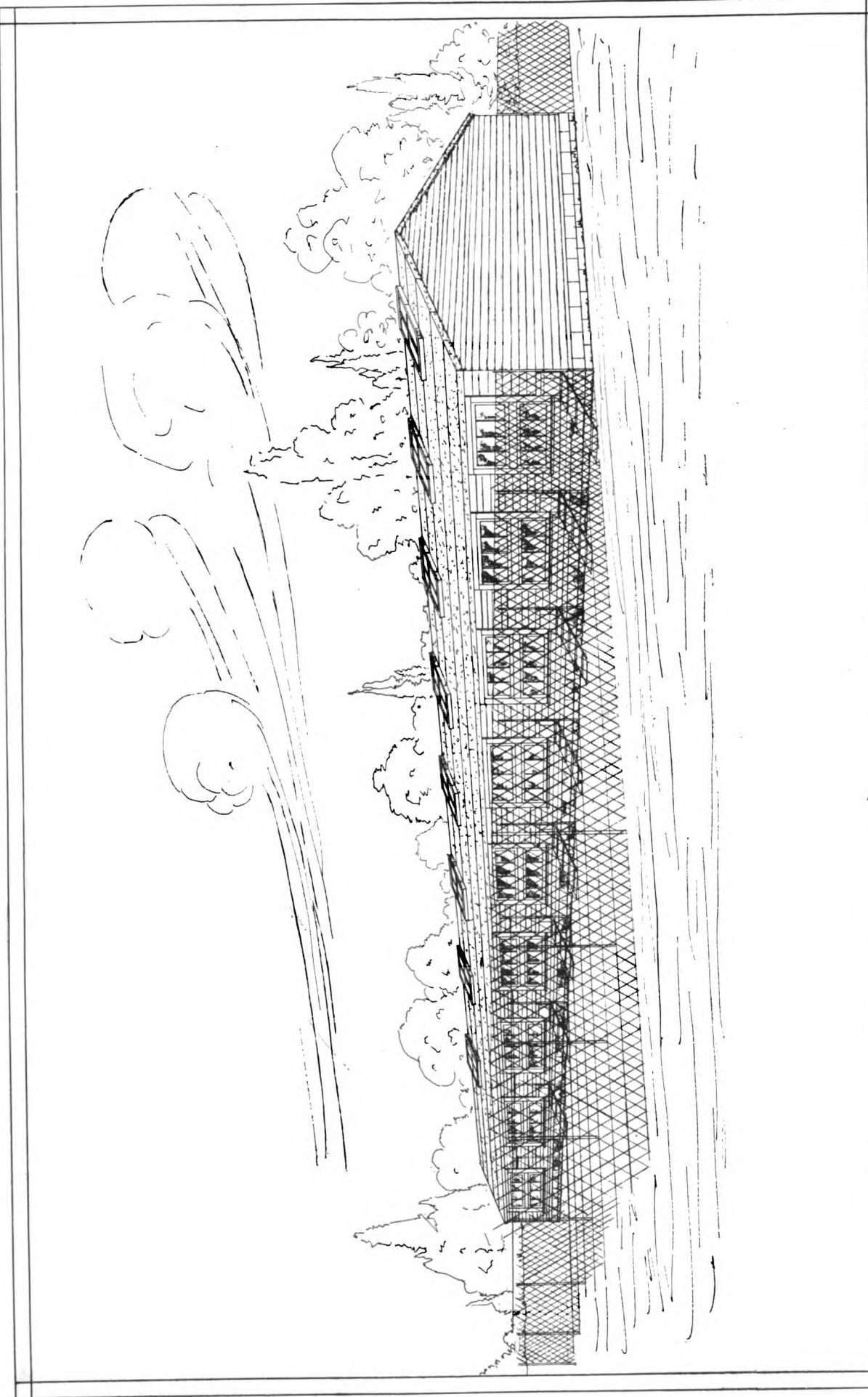
On page 37 you will note the arrangement of the pens.

No. 33

Summary on Houses. All the houses and coops described in the Guide are in actual operation on my farm, with the exception of the brooder house appearing on page 30, which is in operation on a farm adjoining mine, which was under a lease to me for a period of years. Every one of them have proven themselves practical and serving admirably the purpose for which they were constructed. It is the purpose of my Guide to give you all information regarding the construction of all poultry houses herein mentioned. Should you at any time desire to inspect these houses or discuss matters pertaining to them I would be pleased to have you visit my farm any time most convenient to you. This is a standing invitation to you and your friends.



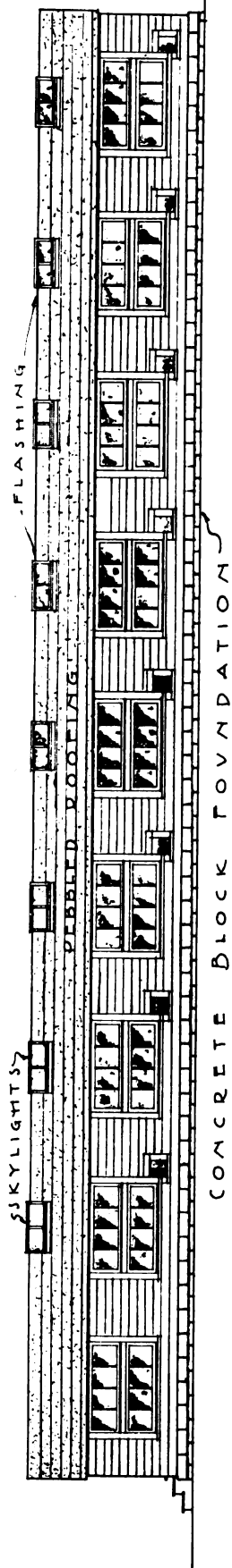
ANOTHER AIRDALE TERRIER
Night Traveler, "Watch your step"

		JOHN G. POORMAN ORIGINATOR	
DRAWING No 19		SPECIAL BREEDING HOUSE	

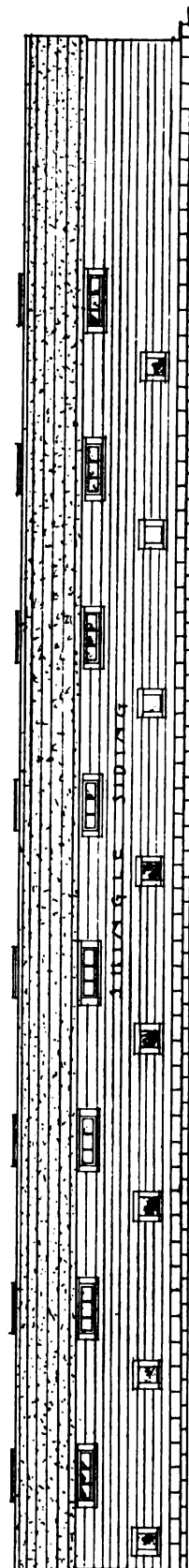


SPECIAL BLEEDING HOVSE.

JOHN G. POORMAN
ORIGINATOR



• S O V T H • E L E V A T I O N •

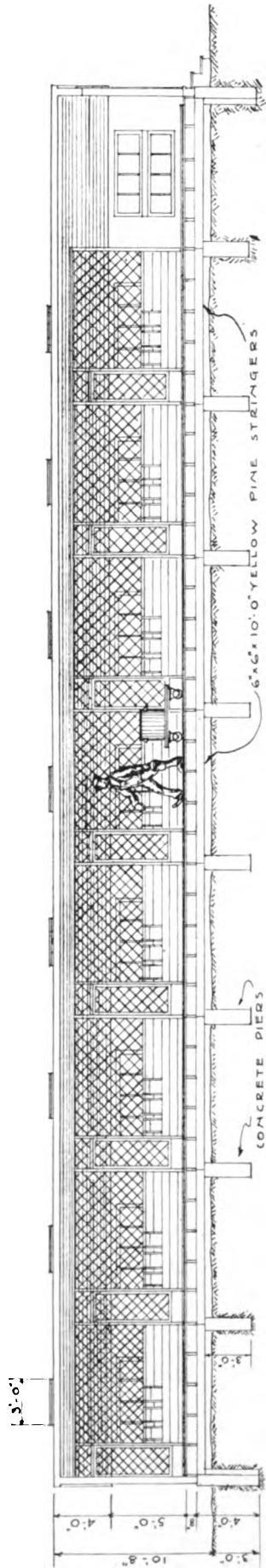


• N O R T H • E L E V A T I O N •

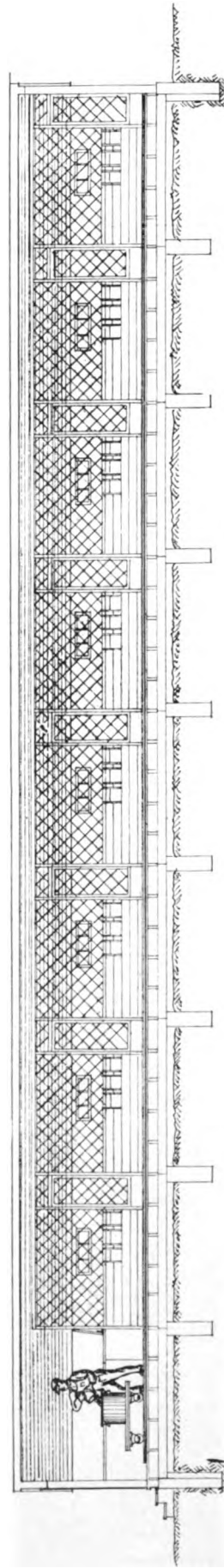
DRAWING
No. 21.

• S P E C I A L • B R E E D I N G • H O U S E •

JOHN G. POORMAN
ORIGINATOR



SECTION LOOKING SOUTH

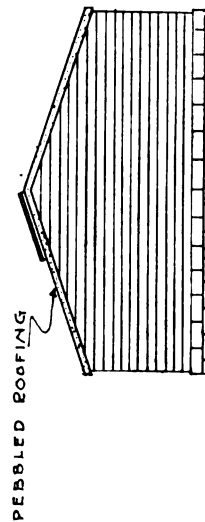
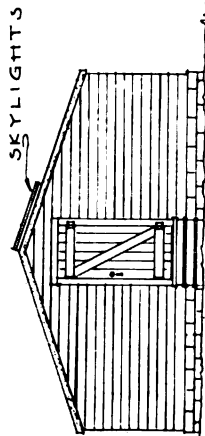


SECTION LOOKING NORTH

DRAWING
NO. .22.

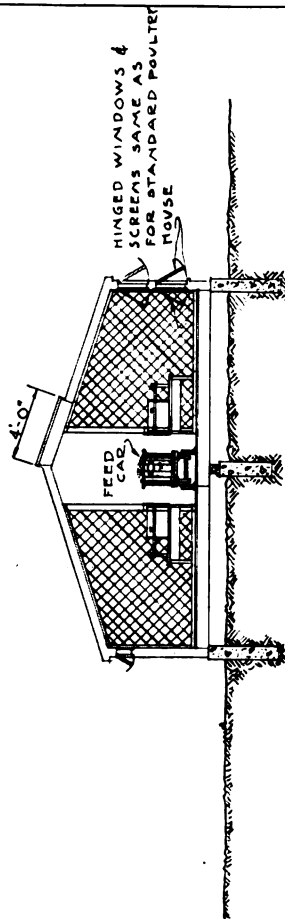
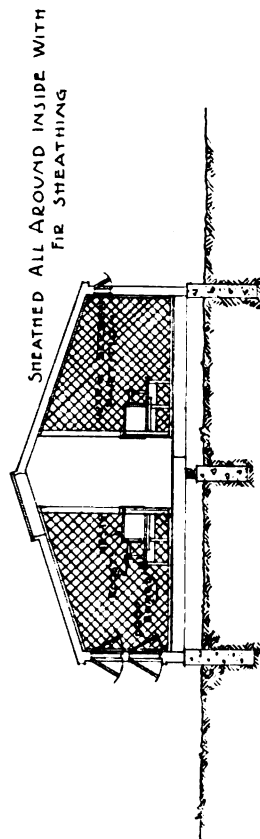
SPECIAL BREEDING HOUSE.

JOHN G. POORMAN
ORIGINATOR



WEST ELEVATION

EAST ELEVATION



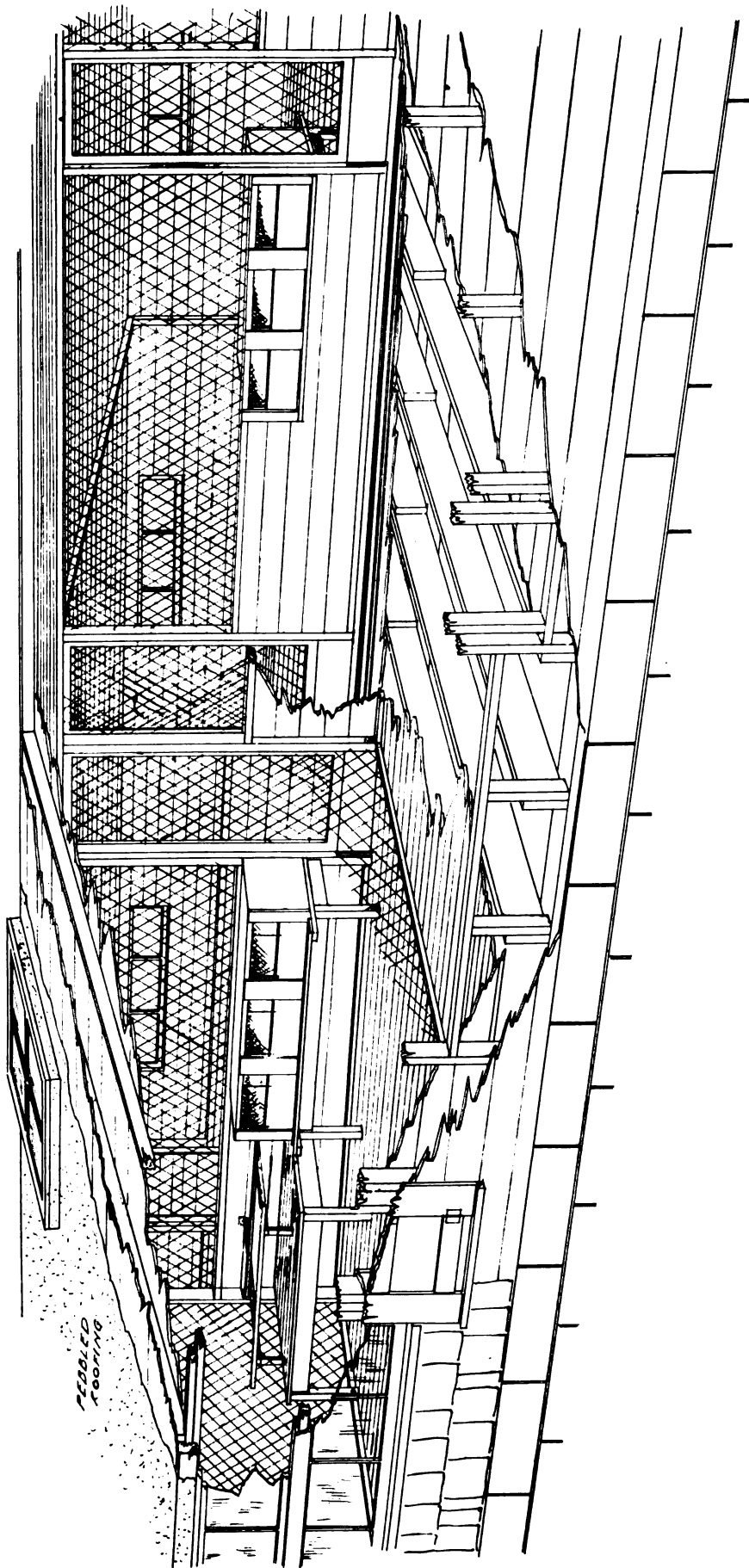
SECTION LOOKING WEST

SECTION LOOKING EAST

DRAWING
NO. 23.

SPECIAL BREEDING HOUSE.

JOHN G. POORMAN
ORIGINATOR



VIEW SHOWING DETAILS OF CONSTRUCTION

JOHN G. POORMAN
ORIGINATOR

·SPECIAL-BREEDING-HOUSE·

DRAWING
NO. 24.

CHAPTER III

Incubation

No. 34

Nature's Way. If we were to follow a hen and observe her natural inclinations in selecting a nesting place we would find quite a variation, depending upon climatic conditions. In the early spring locations free from drafts are the rule. As the season advances and the weather moderates the cooler places are sought after—a secluded spot under a building is the favorite selection. If we were to study as we observe we would learn Nature's reason therefor. In the early spring warmth is essential; later on, moisture. The wayward biddy that steals her nest has demonstrated time and again the wisdom of her selection. If she is not disturbed by rodents or their kind, her brood is numerous, strong and healthy.

No. 35

The Nest Shelter. If it is your desire to hatch Nature's way, do so by assisting Nature. Don't use make shifts such as barrels and boxes. Both will warp and prove unworthy in rainy weather; will permit of draughts in cold weather; will be a haven for lice and mites in warm weather; and will offer no protection from night marauders. By using such contraptions we simply court failure. It is time wasted. Use Poorman's Brood Coop for your nest shelter. See No. 28. They are for this purpose and for the chicks that follow.

No. 36

The Nest. A box sixteen inches square and five inches deep is of proper dimension to accommodate a hen with twelve to fifteen eggs. In early spring, straw is sufficient nesting material. Shape it in circular form slightly depressed in the center. Place the nest box against the rear wall of a Poorman's Brood Coop. It is now ready for occupancy. As the weather moderates the nest should be arranged somewhat differently. In early spring the weather is quite moist and cool and under these conditions the eggs do not evaporate as freely under incubation as when the weather becomes warm and dry. To meet this change the bottom of the nest should be covered with moist earth to a depth of two inches and on top of this one-half inch of sand, slightly

moistened. The customary straw is placed on top of this combination. On the fourteenth day again moisten the earth and sand very slightly. The time to do this is when the hen is off the nest feeding and exercising. It only requires a few minutes.

No. 37

Precautions. The Poorman Brood Coop is secure against weather and night prowlers. Disinfect the coop and nest before hatching operations are under way. Miss Biddy should be gone over thoroughly and given a good dusting for lice three days before setting and another treatment the day she is placed in the brood coop. See No. 28. A lousy hen can not be contented and in trying to get relief will incessantly disturb the eggs and very often ruin the complete setting. It sometimes happens that in moving a broody hen to a new nest and different surroundings her inclination to set disappears and for this reason it is suggested that the transfer be made at night giving her but one egg to cover. If all is well the next morning complete the setting.

No. 38

The Three Weeks Following. Morning, noon, and evening Miss Biddy should be allowed her freedom for feed, water and exercise. Do not feed or water in the coop. Filth will accumulate. During this period feed a mixture of cracked corn, wheat and oats, equal parts by measure; plenty of green feed, grit and charcoal, but no mash. Examine the eggs every day during one of these periods to see if all is well. If an egg is broken and the contents soiling the others it is necessary that new straw be supplied and the soiled eggs be cleaned with a cloth dipped in lukewarm water. This should all be done as quickly as possible to prevent the chilling of the eggs.

No. 39

Artificial Incubation. To take care of a large number of broody hens, and this has to be done in order to accomplish a season's production worth while, is a tedious undertaking. This is greatly eliminated by the use of artificial means of in-

cubation. The incubator is an absolute necessity where chicks are required out of the natural reproduction period; also when desired in quantity. The day-old chick industry could not exist upon the will of the setting hen; it would hardly linger. A poultry farm cannot be practical without the incubator. Fertile eggs can be produced at all times. Nature in this respect is bountiful, but is fast asleep from October until March. The ways of Nature cannot be improved upon and with the incubator we merely lengthen a restricted law. In this instant we make it perpetual.

No. 40

Comparison. Many people contend that incubator chicks are inferior to the hen hatched. No one in his right mind would contend that the incubator chick is superior, but it can be maintained and conclusively proven that with the proper facilities, namely, the incubator, the cellar, and the operation, it is on a par with Nature's best. There is nothing distinguishable in a flock consisting of hatches of both methods, carefully executed. Their progress is identical in growth, which is the only determinable quality that designates health, strength, and vitality.

No. 41

The Incubator. Like all manufactured articles, there are good and bad incubators. The general classifications are in two groups, namely, those heated by hot air; the others, by hot water. The hot water method is direct radiation, the water being heated by oil, gas or coal, this depending upon the size of the incubator. The hot water is conveyed through pipes to the one or more egg chambers heating the air therein, which in turn by means of automatic regulating devices, creates a temperature best suited to artificial incubation. This temperature is conceded by most experts to be 103 degrees Fahrenheit. The hot air machines are divided into two groups; those of direct radiation and those of diffusive principles. Their fuel is oil and gas; also electricity. Those of direct radiation are heated somewhat similar to the hot water machines with the exception that hot air instead of hot water is conveyed through pipes to the one or more egg chambers, heating the air therein in a like manner. The diffusive heat machines are a distinctively different type. They are entirely different in their manner of heating. They induct warmed fresh air into the one or more egg chambers, the temperature of which is

controlled by the same automatic regulating devices as used on other types of machines.

No. 42

Incubator Ventilation. The egg during the twenty-one days of incubation must from the very beginning receive a certain amount of oxygen. This amount of oxygen must be increased daily to properly develop the embryo, which on the twenty-first day becomes the chick. Faulty ventilation is responsible for the large number of embryos that cease to be from the tenth to the fifteenth day of incubation. It means insufficient oxygen, caused by a poor ventilating system.

No. 43

Moisture Devices. Moisture devices for incubators are at times a necessity, especially for operations in high altitudes where the air is excessively dry. Oftentimes they are used to correct faulty incubator construction; also faulty incubator cellar construction. In three-fourths of the area of the United States incubators of proper construction do not require moisture applied direct. When fully developed chicks fail to hatch too much of the egg has evaporated and the membrane, or inner lining of the shell toughens under this process, making it impossible for the chick to break through. For proper application of moisture see No. 47.

No. 44

Selecting Your Incubator. In these days of exacting competition we must be careful that our equipment is perfect. A chick is no longer a chick. A distinction has been created and we now have a classification of good chicks and bad chicks. If your intent is to sell day-old chicks, and it should be, for it is one of the most profitable branches of the industry, be sure that your incubator equipment is capable of producing the best chicks.

No. 45

Incubator Cellars. To operate incubators with the maximum results they must be so placed that the outside changeable temperature will least affect them. For this reason a cellar is best suited for the purpose. It is partly under ground and the temperature therein will not vary as in a location above ground. Another important feature to be gained is the retaining of moisture under the most favorable circumstances and also the appli-

cation of moisture when same becomes necessary. The floor should be of concrete. Windows on three sides and if possible on all four sides. The windows are hinged at the bottom and swing open from the top, with guards on both sides which serve as a rest for windows when open and also prevents the intake of air from all positions but the top, thus permitting of ventilation without any unnecessary exposure to drafts. The height of the ceiling should be at least seven feet and the windows placed directly thereunder. The ordinary three light cellar window, glass nine by fourteen inches is the average size for the purpose.

No. 46

Ventilation. Natural ventilation is the best and this is attainable when all four walls of the cellar are exposed. The temperature of an incubator cellar should never be below sixty and if it is well constructed, the heat thrown off by the incubators will keep it up to about seventy in the coldest weather. Assuming that we start hatching in January, the coldest month. Ventilation under this condition must be governed by the prevailing winds. If from the north, the south windows should be opened for the purpose of ventilation; in other words, always the opposite windows from the direction of the prevailing winds. In moderate weather the windows on three sides can be opened; those on the side of the prevailing wind remaining closed. In warm weather the windows on all four sides can be opened. The average height of an incubator is three and a half feet. With windows on all four walls open and with a brisk wind blowing, the free circulation of air passing through the cellar in no ways interferes with the most sensitive regulators on top of the incubators. This free circulation of air is three feet above them and six feet above the lamps. Conditions so arranged could not be improved upon. To hatch under other conditions means an inferior chick. A poorly ventilated cellar is just as injurious to the embryo as a poorly ventilated incubator. A good incubator will not offset a bad cellar. See that both are good.

No. 47

Moisture. As ventilation is required to supply fresh air and pass out the foul air, forming a circulation which, in addition to the heat thrown off from the incubators, causes more or less evaporation. Moisture in some form must be supplied in sufficient quantities not only to remedy the loss but to meet the added requirements of artificial incubation. Some incubator manufacturers have attempted to meet this deficiency by supplying moisture in the egg chamber. This procedure is very faulty and is responsible for a lot of incubator chick ills. The proper form of supplying moisture is on the concrete cellar floor with a hose. Once a day is sufficient in cold and moderate weather; twice a day during warm weather. This not only freshens and moistens the air, but keeps the cellar in a clean and sanitary condition. Turn on the hose and flush the floor. It is a simple operation and does a world of good.

No. 48

Operation of Incubators. This is a great big open question and should be dealt with accordingly. It is assumed that the manufacturer's instructions covering his particular make of incubator are the ones to follow. The manufacturer's guarantee is based upon you following his instructions implicitly. If a hatch proves unsatisfactory something is wrong; one or more of many things may be the cause. It may be the eggs. To determine this it would be advisable to set three or four hens and the incubator with the same lot of eggs and compare the percentage of hatch. Also test the eggs on the tenth and sixteenth days. This will greatly assist you in determining what is wrong. A large development of blood rings among the incubator eggs is evidence of over-heating or lack of proper ventilation. The blood ring is discernible in testing as being hard and fast to the inner lining or membrane of the egg. Do not confuse it with the loose lines of the same color, which are the veins of the live embryo. Have the thermometer tested with one being used by a doctor. Heat water to a temperature of about 110 degrees and submerge the bulb of both thermometers and as the mercury recedes make your comparison from 105 down to 100 degrees. If the second test shows an increase in dead embryos it is undoubtedly due to poor ventilation. If, however, the percentage of hatch equals the one from the hens, the condition of the eggs is responsible for the results. This could be from improper matings or aged eggs.

No. 49

Cooling Eggs. It is a common complaint among incubator operators that by following instructions of certain makes of incubators, the hatches come off from ten to thirty hours late. Most of the complaints were confined to the early part of the season, February and March. This can only be attributed to one of two possible causes. Insufficient incubator temperature or the excessive cooling of eggs. It has been proven time and again that the time required to take the eggs from the incubators and turn them is also sufficient for the cooling process. When this is practiced the hatches are off on time. If you are having trouble with late hatches try this.

Turning Eggs. Most instructions on the turning of eggs advise that the operation be done twice a day and as near twelve hours apart as possible. The eggs should be handled carefully as any unnecessary jarring might injure the embryo. Some incubators are equipped with egg turning devices which are highly recommended by the manufacturer as labor saving and are as equally condemned by competitors. This is something your good judgment must decide.

Your Choice. Carefully consider the different makes of machines and after you are fully convinced that there is one of them that will produce, under favorable conditions, a grade of chicks capable of holding their own in strong competition, make your purchase accordingly.

Brooding

No. 50

The Chick. No matter which method of incubation is used our reward happens on the twenty and twenty-first days. The eggs we set under the hen or in the incubator are now chicks, and as such they represent the largest IF in the poultry industry. If these chicks are reared successfully they will produce a profit. That is an absolute fact. If they do not meet with a setback in their advancement from day to day, at ten weeks old the majority of the male birds will be sold for broilers; the best are reserved for breeding purposes. The pullets at four months old will be culled, the culls going to market and those standing the test developed into layers. You will remove every if, every chance of a reverse, every chance of a failure, if you will adopt in detail the methods of brooding, either the natural or the artificial that appear in the following paragraphs. There is nothing secretive, or phenomenal concerning these methods. Every expense involved is of a precautionary and protective measure, and you certainly will agree that a dollar invested here and there to prevent a future loss is more sensible than suffering the loss which could easily be ten times that amount.

No. 51

Protection. The first two months chicks require every ounce of protection you can give them, and at no time of their lives, even when matured, will they thrive under neglect. There are millions of farm flocks in the country in comparison to a few thousand poultry farms and back yard flocks. We will therefore analyze the requirements of a farm flock, and whatever is brought out can be applied in principle to either the poultry farm or the back yard flock. The annual total of preventable losses occurring in producing the poultry crop is fully thirty per cent of a billion dollar industry. The average farm hatch per season is in the neighborhood of two hundred and fifty chicks. Barely fifty per cent of these reach maturity. Eighty per cent of them should reach maturity, and will reach maturity if protected.

No. 52

The Losses. It is the month of April. The hens are bringing off their broods. In motherly fashion she starts out with them in search of food. There are some chilly days in April. Among her brood of fifteen chicks are two not quite as strong as the others. They linger; they die. A preventable loss has occurred. A few days later another one is gone, probably the victim of a rat. Another preventable loss has occurred. While scratching in the barn yard a horse caused another preventable loss by stepping on a chick. While foraging in the grain fields, a shower comes up. They are quite a ways from the farm buildings. Mother hen does her best to shelter them and it is remarkable that she saves all but two. This is also a preventable loss. They now discover that when the pigs make a peculiar noise, feed is at hand. The pigs call them to dinner and another

chick is lost: accidentally eaten by one of the pigs. This is an accident that will occur every time this particular pig or pigs can catch one. This loss is also preventable. Other forms of possible losses that can occur at any time are from stray dogs and cats; the elusive weasel, mink and skunk, and the very destructive rat. Isn't it a wonder that any chicks are left when fall comes? The bright side of this discouraging picture lies in the fact that a very simple procedure wipes out every preventable loss above mentioned. Fence in your poultry and protect it as you do your grain, stock and everything you possess. See No. 20 for other information on fencing.

No. 53

The Poultry Pasture. Let us get away from the expression of poultry yard. It sounds too confining. Poultry pasture would be more becoming. One acre devoted to poultry, properly fenced, will yield a crop with a selling value of that equaling ten acres of grain. An acre is ample pasture for the average farm poultry requirements. It will take care of six hundred youngsters to ten weeks old, three hundred to four months old and two hundred full grown birds.

No. 54

Hen Raised Chicks. We cannot call this Nature's way for the reason quite a lot of it, in fact all of it is under our control. We endeavor to persuade the hen to believe our efforts are for the welfare of her chicks, even though it is at the expense of her liberty. In a preceding paragraph we completed instructions on hen hatched chicks. It is now our task to raise them. A hen will take care of fifteen chicks in March and April. In May and June as high as twenty-five chicks. It is therefore advisable when setting eggs to set five or six hens at the same time. This will permit at hatching time to give some of the hens their full quota of chicks and release the others for laying. After the hatches are off put the chicks in a box and keep them warm. Remove the nest from the brood coop and give the hen a thorough dusting for lice. Remove the floor of the brood coop and clean with a disinfectant. Replace the floor and the hen but not the nest. You then put the allotted number of chicks under each hen and do not disturb them further until thirty-six hours old. Feed the hen as always, but do not give her freedom during this time. Place the brood coop so that the rear is one inch higher than the front. This prevents rain and water from reaching the rear of the coop, keeping it nice and dry for the chicks.

No. 55

The First Feed. A mixture of equal parts by measure of cracked wheat, cracked corn and pin-head oats is a very good scratch feed for chicks. To twenty-five pounds of this mixture add one pound of chick grit. The first feed will be of this mixture fed sparingly on the floor of the

JOHN G. POORMAN **TINLEY PARK, ILL., U.S.A.**

STRAINS

200 EGG

EGGS **STOCKS** **CHICKS**

VIGOR **SIZE** **QUALITY**

WHITE ORPINGTONS **R.C. RHODE ISLAND REDS**
BARRED PLYM. ROCKS **WHITE WYANDOTTES**

**TRAP-NESTED
BRED-TO-LAY
POULTRY**

BUFF ORPINGTONS **S.C. RHODE ISLAND REDS**
WHITE PLYM. ROCKS **S.C. WHITE LEGHORNS**

A PEN OF BRED-TO-LAY BARRED PLYMOUTH ROCKS

brood coop. The hen will inform her brood that "dinner is ready," and with a little coaching has them readily pecking at the grain. Immediately after the first feed supply water in a shallow pan. For the first three days feed the scratch feed at equal intervals four times daily. Keep the water fresh and clean. Both hen and chicks are in confinement for this period.

No. 56

The Fourth Day. If the grass is dry and the sun warm the chicks may be liberated. This is accomplished by raising the wire door of brood coop and inserting the hen guard. This readily allows the passage of chicks but will retain the hen. Do not put the chicks out; let them learn of their own accord. The hen will advance to the front of the coop and stick her head through the guard. To assist her in this it would be well to have this occur at feed time. When chicks are at liberty give the hen her feed immediately in front of the brood coop. The chick feed is placed further away so that the hen cannot reach it. Water must be so placed so that hen and chicks can have it at will. On this day start feeding, giving mash to the chicks, all they will eat up clean in fifteen minutes. This is best served in mash hoppers made for the purpose. They prevent waste and keep the mash clean. For description of growing mash see No. 104.

No. 57

Daily Routine For the Next Forty Days. The feeding schedule is as follows:

- 6:00 a. m. Scratch Feed.
- 10:00 a. m. Growing Mash.
- 2:00 p. m. Growing Mash.
- 6:00 p. m. Scratch Feed.

Quantity of Each Meal. All they will consume in fifteen minutes.

Water. Supply fresh water just before each meal. Keep the water fountain clean at all times.

Green Feed. If chicks are running on grass they will provide their own green feed; otherwise it will have to be supplied.

Charcoal. Keep it in front of them all the time. Never let the chicks out in high grass with a heavy dew. Cut the grass or permit a few sheep to graze in the poultry pasture. It is best on a cool morning to keep chicks confined a little later. At two weeks old permit the hen her liberty of the poultry pasture. She has her liberty but at the same time she is under your jurisdiction. At the approach of a storm you could in a few moments have all under cover in their brood coops secure from any loss.

The Evening Chore. As soon as the last chick has retired in the brood coop it becomes your duty to close the wire door, making it absolutely impossible for the chicks to be disturbed during the night by rats coming from a distance that they would never attempt in the daytime. Do not chase the chicks in the brood coop in the evening. You will note by observation that the last thing they do is to take a drink of water. It appears to be the best drink of the day. To be deprived of this would mean an uncomfortable night.

No. 58

Cleanliness. One day a week should be set aside for cleaning the brood coop. The removable floor should be taken out and cleaned with water mixed with a good disinfectant. Turn the brood coop up with the roof on the ground and inspect corners for mites. As a preventive paint corners with a mixture of one pint of crude carbolic acid mixed with one gallon of kerosene oil. It takes about ten minutes to clean the floor and paint the corners. Don't neglect this simple duty. It is fifty per cent of your success. On the same day thoroughly clean the water fountain and mash hopper with the same water disinfectant used for cleaning the floors. Clean all the feeding and watering utensils first; then clean the floors. Dust the hen every fifteenth day. If she is kept free of lice it is impossible for the chicks to become infested with them.

No. 59

At Seven Weeks Old. At this time the scratch feed is changed to two parts whole wheat and one part cracked corn. The dry mash remains the same. It is fed in larger hoppers and kept before the chicks all the time between the hours of 8 a. m. and 5 p. m.

The scratch feed is fed at 6 a. m. and 6 p. m., all they will eat up in fifteen minutes. Supply fresh water morning, noon and night. Have grit and charcoal in front of them at all times. Cleaning and other chores remain the same and should be strictly attended to.

No. 60

At Ten Weeks Old. The brood coop is now quite crowded and if the hen has not deserted her brood it is time to take her from them. This could be done earlier but nothing would be gained unless room was needed. It is also time for the male birds to be disposed of. There is more money in a two pound broiler than in a six pound roaster. See No. 113 for exact figures. Select some of the most promising cockerels for your breeders for the next season. Sell all that are left so that room is made for the pullets.

No. 61

At Four Months Old. The pullets are well along at this time and have about outgrown the brood coops. Cull them every carefully and dispose of all runts and those having glaring defects. Those that are left are now ready to be transferred to the laying house. Before making this transfer, the laying house should be given a very thorough cleaning. You must work on this theory; where there are lice and mites there are no eggs. Give every pullet a good dusting for lice at the time of making the transfer. Pullets that are expected to lay in October should be in the laying houses by the middle of August.

No. 62

Summary. We have gone through the period of brooding with hens and if you will put it in the actual operation as herein explained you will not

lose more than one or two chicks from every fifteen. You will eradicate every possible chance of a loss, therefore there cannot be any.

No. 63

Artificial Brooding. There are as many systems of artificial brooding and perhaps more than there are of incubators. They are classified as lamp brooders, hot water heated brooders, colony stove brooders and fireless brooders. The objective of artificial brooding is to rear chicks in larger numbers than is possible with hens and at any time of the year. Any brooder system that does not permit and allow for the development of the chicks into a strong, hardy specimen at maturity is imposing upon the good will of the purchaser. Chicks cannot be raised like bees, in swarms, and any sales literature asserting a capacity of five hundred to a thousand chicks for its brooder, same to be operated in a colony house twenty feet square, is not only exaggerated, but leaves the buyer without one single ray of hope for success. The industry suffers every time a sale of this kind is consummated. In two weeks time the chicks will outgrow the brooder and in a month will outgrow the house. It leaves the impression that chicks can be developed by the thousands at the very nominal expenditure of about \$200 per colony house with a rated capacity of five hundred to one thousand chicks. It is absurd. While this criticism is openly made, the writer must, in justice to all concerned, give his version of what a brooder house of a given capacity must be.

No. 64

Poorman's Poultry Guide. My Guide is nothing more or less than what the word means, and this reference to it is brought in at this time to instill into your thoughts the utmost importance of artificial brooding, and of its far-reaching effect upon the fowls you are going to rear. The treatment they receive during the first two months seals their destiny just as sure as two and two are four. Nothing within the power of man can give new life to a stunted chick. Stifling heated air, impure air and crowded quarters will stunt chicks and will prevent any chance of a profit emanating from them. A poultry farm cannot be properly conducted with this kind of artificial brooding. If you will permit my Guide to assist you in this one all important matter, you will be repaid hundreds of times over the small cost in service rendered.

No. 65

A Sane View. Let us approach this subject with every consideration that it deserves, ever keeping in mind the one main issue—YOUR SUCCESS. We will therefore deal with chicks by the hundreds, fully realizing that two hundred pullets well raised is something accomplished. What a beginner must have is one house in which his operations can be started and carried through to completion. This is best represented in a Poorman's Standard Poultry House, complete working drawings of which you will find on other pages

of this Guide. See No. 23 for description of the Poorman's Standard Poultry House.

No. 66

Number of Chicks to a Pen. Some one conceived the idea that the more chicks to a pen the less labor would be required to feed and care for them. While a saving of labor is always desired, are you willing to accept it at a sacrifice? Fifty to seventy-five chicks to a pen is all that should ever be attempted. They are more easily controlled, their individual needs receive better attention. The extra time that you give is not wasted. When fall comes around the quality of your stock will show the attention and care you have bestowed upon it. The difference in figures means just this—do you want to raise ninety per cent, or are you satisfied with a very much smaller per cent, ranging from a complete failure to sixty per cent?

No. 67

Confusion. Don't permit any brooder manufacturer, myself included, to confuse you for one single moment on the real fundamental principles of artificial brooding. I have used heated brooders, lamp and hot water, for years prior to 1911. Since then I have used nothing but feather brooders, operated in a nice living temperature of seventy to seventy-five degrees. The principle of a heated brooder is to produce a temperature that will keep the chicks warm and contented. This has been determined at ninety degrees. Should the temperature lower from any cause, and there are many, the chicks will become uncomfortable; they will crowd, sweat, chill, become ill and die. Let us forget everything for a moment and concentrate on what ninety degrees Fahrenheit means. It is not a desirable temperature for man, beast or fowl. It is hot summer weather of the kind that human babies suffer most in. It is the temperature of the weather in July and August. All poultry authorities agree that it is too hot to raise chicks in these two months, as they don't thrive properly. How can they thrive properly in a heated brooder at ninety degrees? They cannot, and they don't. Chicks subjected to a high temperature soon become listless, their vitality is sapped, and the prospects of them developing into profitable layers is absolutely void, not even one chance in a hundred. The one big reason most poultry ventures are a failure is their brooder equipment. Poultry is always in demand, so are eggs, and at profitable prices. They simply fail to produce them.

No. 68

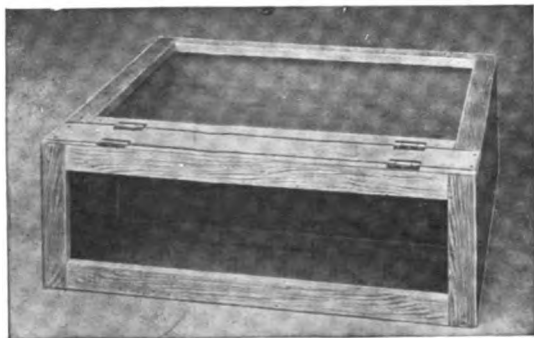
Feather Hovers. The hen heats her brood by contact. Her feathers also play an important part in retaining her body heat as well as the body heat of the chicks. Feather hovers take the natural part of the hen, retaining the body heat of the chicks in the same manner that bedding retains the heat of the human body while it reposes in a room with all windows open during severe winter weather, as warm as toast. Feather hovers will raise chicks in April, May and June

as well as the hen; for the other nine months chicks under feather hovers will do better than under hens. Every risk is absolutely done away with.

No. 69

Where Feather Brooders Can Be Operated. As the feather brooder is not heated, in cold weather it must be operated in a building that can be heated to a temperature of seventy to seventy-five degrees. The chicks must have this temperature to thrive in during the daytime. At night the building temperature can go down to fifty degrees. The chicks are under the feathers and the low temperature will not affect them one iota. The only precaution to take when this happens is to heat up the building in the morning before releasing the chicks for breakfast. My Brooder and Incubator House shown in Drawings Nos. 1, 2, 3, 4, 5 and 6 and described in No. 30 will accommodate ten thousand chicks under feather brooders up to one month old, after which they must be moved elsewhere. My Brooder House shown in Drawing No. 18 will accommodate two thousand two hundred and fifty chicks until six weeks old. It is described in No. 31. My Poor-man's Standard Poultry House is the only complete poultry house in the world. It is shown in Drawings on pages 9 to 18 and is described in No. 23. These three houses are heated for chicks in cold weather and as the weather moderates, so does the heat. Beginning with May heat is not necessary. The first two houses are heated by a hot water system. The Poorman Standard Poultry House can be heated by either a hot water system or a hard coal magazine heating stove. This house will accommodate six hundred chicks to ten weeks old, three hundred to four months old and one hundred and fifty to two hundred pullets through the laying season.

The Colony Brood Coop, as shown in Drawing on page 21, and described in No. 29, is recommended for mild weather only. It is equipped with a feather brooder and will accommodate fifty chicks any time after the middle of April. This is the best back-yard brooder-coop any one desiring to raise a few chicks could wish for. By disposing of the male birds as soon as they reach a pound and a quarter, the brood coop will take care of the pullets until they are three and a half



Cut No. 1

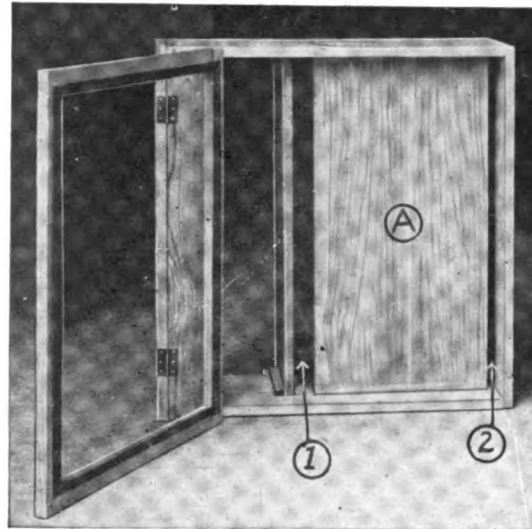
Cut No. 1 shows the feather brooder complete in proper position on the floor.

months old. This assuming that they are April 20th to May 10th hatch.

No. 70

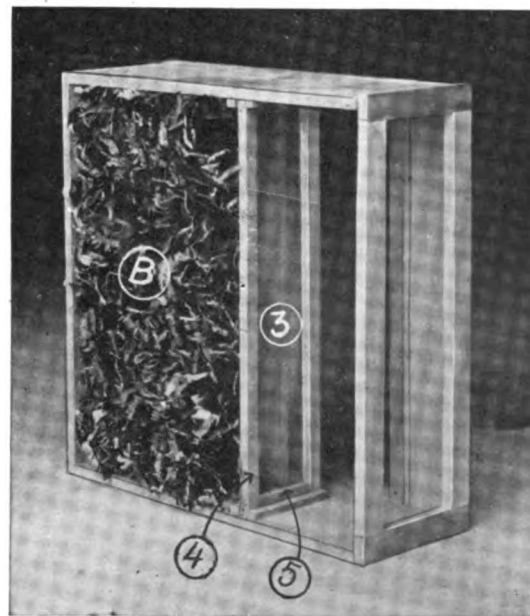
How to Make the Brooder. The brooder is the box that contains the feather-hover. The hover keeps the chicks warm; the brooder protects them

(Continued on Page 47)



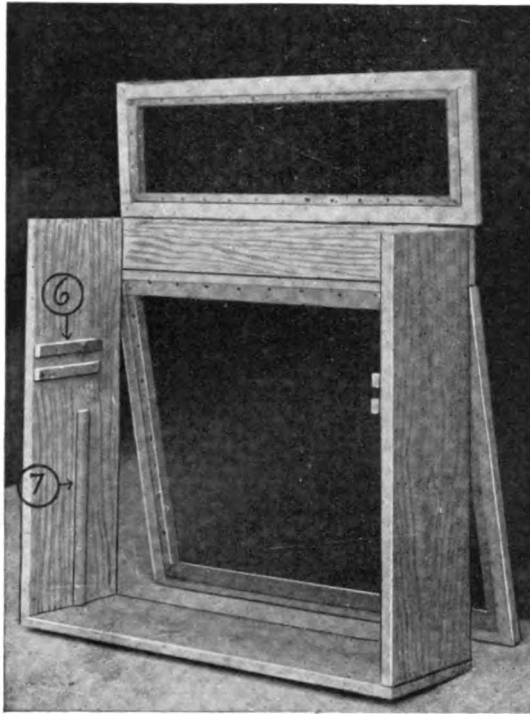
Cut No. 2

Cut No. 2 shows the top of feather board, marked A. It is $28\frac{1}{2}$ in. long by 15 in. wide. Arrow No. 1 indicates space between feather board and wire chick guard, which is $2\frac{1}{4}$ in. Arrow No. 2 indicates the space between feather board and rear wall of brooder, which is $\frac{1}{2}$ in.



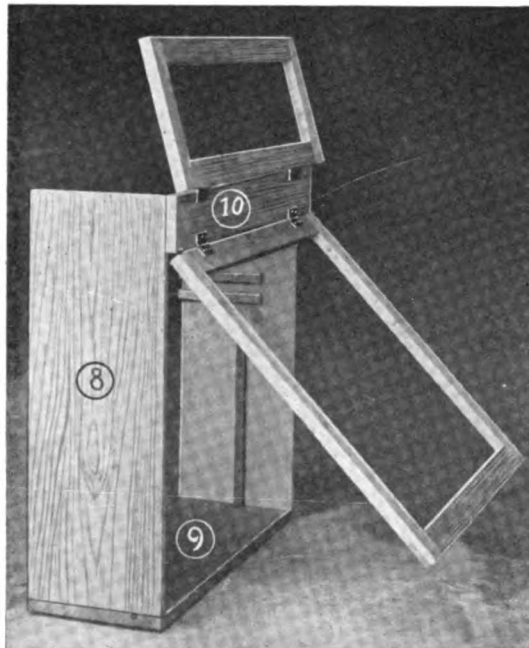
Cut No. 3

Cut No. 3 shows bottom view of brooder, the letter B is the feathers. (3) is $\frac{1}{4}$ in. mesh wire cloth for chick guard, which is attached to chick-guard frame indicated by arrows No. 4 and No. 5. No. 4 is the top and bottom lengths made of inch lumber $28\frac{1}{2}$ ins. long. No. 5 are the two end pieces made of inch lumber 5 ins. long. The end pieces nail inside of the top and bottom pieces.



Cut No. 4

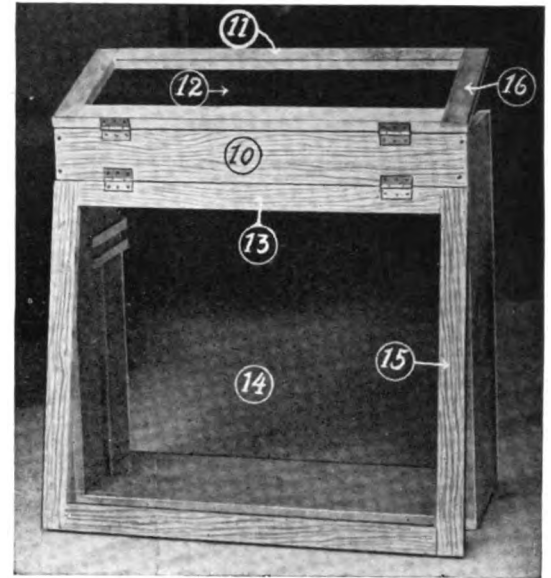
Cut No. 4. Arrow No. 6 shows cleats which hold the chick-guard in place and are made from half-inch lumber cut into 7 in. lengths. Arrow No. 7 shows cleat for supporting the feather board, one on each side of brooder. They are made of $\frac{1}{2}$ -in. lumber, 16 ins. long. The proper position of the cleats is to permit the feathers to come within $\frac{3}{4}$ in. of the floor.



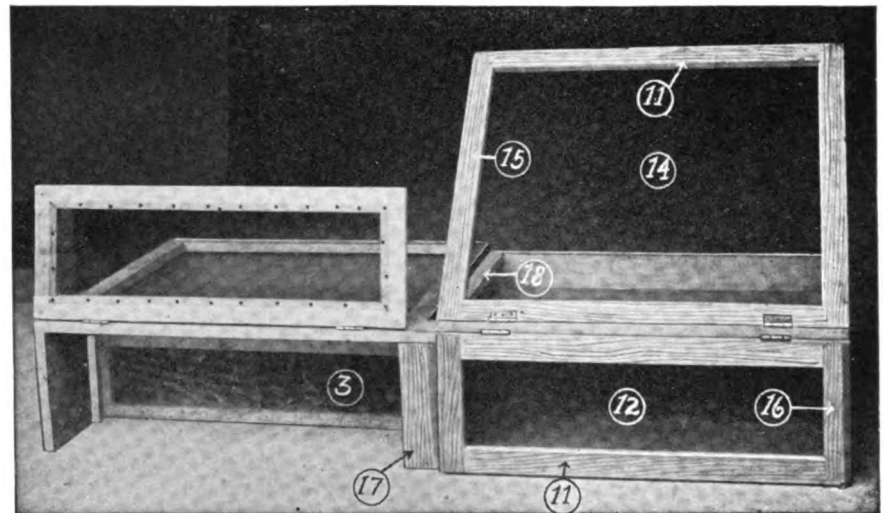
Cut No. 5

Cut No. 5 shows brooder frame and doors. (8) shows the sides which are two pieces of inch lumber 28 ins. by 10 ins. (9) shows the rear which is one piece of inch lumber 30 $\frac{1}{4}$ ins. by 10 ins. Please note that the sides nail to the inside the top frames. This supporting board is of inch lumber, 30 $\frac{1}{4}$ ins. by 3 $\frac{3}{4}$ ins.

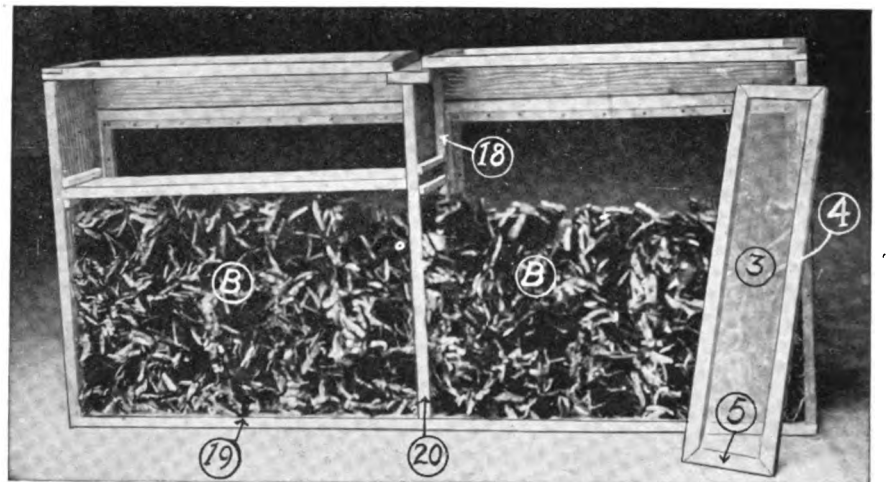
Cut No. 6. Arrow No. 11 shows top and bottom boards of front door. They are of inch lumber 30 ins. by 1 $\frac{3}{4}$ ins. Arrow No. 16 shows the end boards of the front door. They are of inch lumber 11 ins. by 1 $\frac{3}{4}$ ins. This door is made in dovetail fashion and is covered with $\frac{1}{4}$ in. wire mesh cloth, as indicated by arrow No. 12. Arrows No. 13 and No. 15 constitute the frame for the top door. This requires two pieces of inch lumber 30 $\frac{1}{4}$ ins. by 1 $\frac{3}{4}$ ins. and two pieces of inch lumber 25 ins. by 1 $\frac{3}{4}$ ins. These four lengths should be dovetailed and covered with $\frac{1}{4}$ -in. wire mesh cloth, as indicated by (14).



Cut No. 6



Cut No. 7



Cut No. 8

Cuts No. 7 and No. 8 show the construction of a two-compartment feather brooder so arranged that each compartment enters into different runways or pens. Arrow No. 17 is of one-inch lumber 2 $\frac{3}{4}$ ins. by 10 ins. This allows for the two front doors to be closed with a space of 2 $\frac{1}{2}$ ins. between, which will permit the brooder to fit snug against the runway or pen partition. Arrow No. 18 is of one inch lumber 27 ins. by 1 $\frac{3}{4}$ ins. It is attached to the division board Arrow No. 20, and is flush with the rear and sides. It serves as a center rest for the two top doors. Arrow No. 19 is the rear for double-brooder and is of one inch lumber 59 $\frac{1}{2}$ ins. by 10 ins. Arrow No. 20 is the center or division board of one inch lumber 27 ins. by 9 ins.

Note—In making a double compartment brooder the two front doors are to be 28 $\frac{1}{2}$ ins. instead of 30 ins. The two top doors are to be 29 $\frac{1}{2}$ ins. instead of 30 $\frac{1}{4}$ ins.

(Continued from Page 45)

from any nocturnal visitor. My combination of brooder and feather-hover is absolute safety against disease and accidents. I do not manufacture the brooder. It is very simple to make and if you do not wish to undertake it any handy man can do the job in a few hours. The feather-hover I sell at the very nominal price of \$5.

No. 71

Directions For Operating Brooder. There is no real operation to this brooder; there is nothing to go wrong. Its operation is in what you do to it. The way you leave it in the evening is the identical way you will find it in the morning. There is no need of intermediate or midnight attention. You can rest assured that your chicks are safer at night under the featherboards than they are under your immediate attention in the daytime. This is no reflection on your attention; it is merely a comparison to show how well taken care of your chicks are at night. If you have not operated heated brooders you will not fully realize the full meaning of this assured safety.

If the room or house in which the brooder is to be operated has a dirt or cement floor, it will be absolutely necessary to attach a board floor to the brooder. This can be of one-half inch or three-quarter inch flooring. This will not be necessary when the original floor is of wood.

One-half inch of finely cut straw, clover or alfalfa should be evenly spread over the floor of the brooder. Put in the featherboard and everything is in readiness for the chicks. Remove the chicks from the incubator as soon as they are all dry and place them under the featherboard. Assuming this is Monday morning, the chicks should not be disturbed or fed until Tuesday afternoon. If you are having chicks shipped in to you put them under the featherboard immediately upon arrival. As soon as they are nice and warm, one or two hours' rest, give them their first feed.

No. 72

How to Feed. Brooder chicks are fed the same feed as chicks with hens. The first feed is given on the brooder floor in the space between the chick-guard and the door. Remove the straw from this part of the floor, then take out the featherboard and the chick guard. The chicks are before you and with the slow dropping of the scratch feed from your hand on the bare part of the floor, accompanied by your imitation of a hen clucking ("cluck, cluck, cluck," etc.) you will be greatly surprised with the rapidity they will learn to eat. Making a tapping noise with your finger among the scratch grain on the floor is also very instructive to the chicks. After fifteen minutes of this maneuvering, the featherboard and the chick guard is replaced, the chicks remaining thereunder until the next feed. The scratch feed is described in No. 103. We will again assume that the first feed was given on Tuesday at 2 p. m. For the second feed make the same preparations as for the first, but before feeding them the scratch feed they must be taught to drink. Use a good drink fountain, one that will permit of

drinking without permitting the chick to become thoroughly drenched. Take a few chicks and place their beaks in the water; the next swallow will be of their own accord; others will come up and imitate them. A few minutes devoted to teaching them to drink at each meal for the first few days will be all that is required. It is now 6 p. m. The chicks have been fed and watered. The featherboard and the chick guard are replaced. Everything is secure for the night. Wednesday at 6 a. m. the third feed is given and is the same as the second feed; at 10 a. m. the fourth feed is given which is the same; at 2 p. m. the fifth feed, consisting of the same, is given. The amount of scratch feed depends upon the number of chicks. They should be given all they will eat during the fifteen minutes. This feed and rest program continues until the 6 a. m. feed of Saturday. This feed is prepared out in the pen instead of the brooder. The chick guard is raised, the chick door opened, and in response to your cluck, cluck, you will find every chick darting from under the featherboard to meet your call for breakfast. Make a temporary pen that will not permit them to get beyond two feet from the brooder. They are now permitted to remain out for 30 minutes at meal time. The next feed at 10 a. m., the diet is changed. Instead of scratch feed they receive growing mash, all they will eat in fifteen minutes. This is best served in mash hoppers made for the purpose. They prevent waste and keep the mash clean. For description of growing mash see No. 104.

For the Next Forty Days. The feeding schedule is as follows:

- 6:00 a. m. Scratch Feed.
- 10:00 a. m. Growing Mash.
- 2:00 p. m. Growing Mash.
- 6:00 p. m. Scratch Feed.

Quantity. The morning and evening feed scheduled for 6 a. m. and 6 p. m. is determined by daylight. Five o'clock in the morning during the summer is all right, so is 7 o'clock in the evening. These two feeds are for scratch grain and after the chicks are five days old should be thrown in the litter, as this will promote exercise and keep them busy all day long. The way to determine, if you are feeding the right amount of scratch feed is to examine the litter and if there is none among it slightly increase the next feed. If you find quite a lot of grain among the litter cut down on the next grain feed. The two feeds of Growing Mash is easy to determine, as you will give them all they will eat in fifteen minutes. Young chicks should not be overfed. There is more danger to overfeeding than to underfeeding.

Water Supply. Give fresh, clean water before every feed. It is just as important as feed. Keep the water fountain clean at all times.

Green Feed. Beginning the second week the chicks must have green feed in some form. Lettuce is best for the first few weeks and as the chicks become larger Swiss chard is very good. The green feed can be fed at noon. Give them all they will eat.

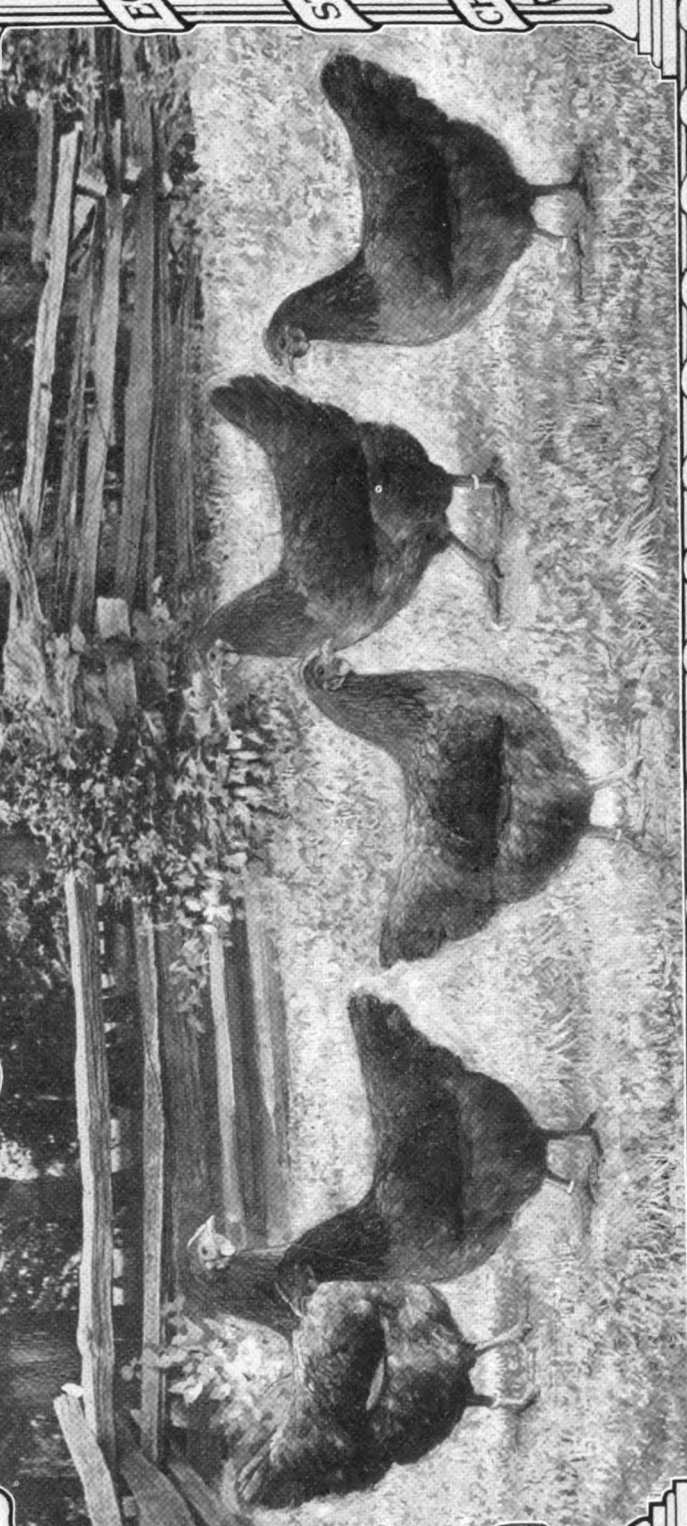
Charcoal. After the first week keep charcoal in

JOHN G. POORMAN
BOX 100
TINLEY PARK, ILL., U.S.A.

STRAINS

200 EGG

EGGS
STOCK
CHICKS



VIGOR
SIZE
QUALITY

**TRAP-NESTED
BRED-TO-LAY
POULTRY**

WHITE ORPINGTONS **R.C. RHODE ISLAND REDS**
PARRED PLYM. ROCKS **WHITE WYANDOTTES**
BUFF ORPINGTONS **S.C. RHODE ISLAND REDS**
WHITE PLYM. ROCKS **S.C. WHITE LEGHORNS**

A PEN OF BRED-TO-LAY R. C. RHODE ISLAND REDS

front of them continuously. It is a great regulator and will keep the chicks in perfect health.

No. 73

At Eight Days Old. Give the chicks the liberty of the entire pen and only confine them to the brooder when the room temperature is low. They will go in and out of the hover of their own accord.

The Pen. The pen should be covered with litter the same as used in the brooder. It should be cleaned every two weeks and fresh litter provided. If this is attended to very strictly good results will materialize. Do not be neglectful. It is the sure sign of impending failure.

No. 74

Cleanliness. The hover must be cleaned twice a week. This requires about five minutes. The old litter or bedding is taken out and the new is put in. Once a week the brooder should be thoroughly disinfected with a solution of water and a good disinfectant. This should be done on one of the days the bedding is changed. Use a large sponge to apply the solution, and also to dry it.

No. 75

Brooder Ventilation. It is very important that you know that the feather board must always be placed one-half inch from the rear wall of the brooder. This is required for ventilation and should never be otherwise. To close this tight, the chicks would become too warm. On very warm nights the space can be increased to an inch.

No. 76

Putting Them To Bed. The manner of brooding them for the first week teaches them that the feather-hover is their mother. They will go back and forth at will. If you will go in at dusk, just as it is getting dark you will find them all under the feathers and perfectly contented. Close all brooder doors and your chores are done for the day. When chicks are three weeks old there will be no need of using the chick guard. Never chase the chicks into the brooder for the reason you want to go some place, or get done in a hurry. Each chick by nightfall will have a full crop and if chased into the brooder it will in all likelihood be deprived of water, its evening drink. It is not comfortable to be thirsty all night, but in addition to this it will cause indigestion. Let them choose the time to retire.

No. 77

Outside Runs. There should be an out-door runway for every pen. After chicks are ten days old

they can be let out in the runway providing the weather is nice. This would only apply to chicks in our climate hatched after the middle of March. When the weather will permit chicks must be outdoors, they will develop much better in every respect.

No. 78

Raise Feather Board. As chicks develop the feather-board should be slightly elevated from time to time, but not more than a half-inch at a time. At about six to seven weeks old they will not require it and will show inclination to sleep from under it. At this time the feather-board can be removed from the brooder. The temperature of the building is sufficient to keep the chicks at that age.

No. 79

At Seven Weeks Old. Refer to No. 59 and do as therein directed, as regards to scratch feed, mash, water and cleanliness. Nice wholesome feed, pure water and clean quarters.

No. 80

At Ten Weeks Old. Depending upon what kind of a house you are raising the chicks in, at about this period it is time to start making reductions. It is time to begin culling, removing the unfit and the undesirables through market channels at a profit, and at the same time making room for the desirables to expand and develop. It is the profitable time to dispose of every cockerel not needed for breeding and every pullet that will not pass a rigid inspection of the characteristics of her breed. See No. 113 for exact information on the marketing of broilers. The remaining birds must now be taught to roost. Low temporary perches give quicker results, but they are more or less a nuisance at cleaning time. It is best to place them on the permanent perches every other night until they are all roosting. Five or six nights usually completes the job.

No. 81

At Four Months Old. Go over the pullets and give them another culling. Refer to No. 61 and follow instructions therein noted.

No. 82

Summary. We have gone through the period of artificial brooding and if you will put it in the actual operation as herein given, which will also include proper housing, you will raise ninety per cent of the chicks hatched. And they will be the equal of the best hen-raised chicks in every detail.

JOHN G. POORMAN
 BOX 100
 TINLEY PARK, ILL., U.S.A.

STRAINS

200 EGG

EGGS
STOCK
CHICKS



VIGOR
SIZE
QUALITY

**TRAP-NESTED
 BRED-TO-LAY
 POULTRY**

WHITE ORPINGTONS
BARRED PLYM. ROCKS
R.C. RHODE ISLAND REDS
WHITE WYANDOTTES

WHITE ORPINGTONS
BARRED PLYM. ROCKS
R.C. RHODE ISLAND REDS
WHITE WYANDOTTES

STRAINS

200 EGG

EGGS
STOCK
CHICKS

JOHN G. POORMAN
 BOX 100
 TINLEY PARK, ILL., U.S.A.

STRAINS

200 EGG

EGGS
STOCK
CHICKS

A PEN OF BRED-TO-LAY WHITE LEGHORNS

CHAPTER V

Egg Production

No. 83

Preparing For Egg Production. Preparing pullets for egg production does not start with the individual itself. The vitality of the parent stock, the treatment of the egg during incubation, and the care of the chick from a day to four months old, are the determining factors of what can be expected in the way of egg production. There must never be a let up in your attentions to the details of feeding, watering and cleaning. Any neglect to the slightest details is liable to result in disappointment. One point to always bear in mind is not to gorge or force the pullets into laying. It cannot be done and your experiment may result in the pullets moulting instead of laying. Place before them in individual hoppers, and accessible at all times, grit, oyster shells, and charcoal. The drinking fountain or buckets, whichever you use must be kept absolutely clean. This does not mean to clean them once a week, but every time fresh water is given. As long as the weather remains warm, water, morning, noon and evening. When it becomes cool, morning and noon; in real cold weather, once once a day. The water must be available to the birds whenever they want and if the receptacle will not hold a day's supply, refill it. Eggs may never be expected if the water supply is short and uncertain. Over ninety per cent of the egg is water and the pullets should be induced to drink water freely. A good dry mash capable of making eggs should be in hoppers before them at all times. Note No. 104. Scratch feed should be fed twice a day, morning and evening, in litter (straw), three to four inches deep. Note No. 103. The amount of scratch feed the birds will eat depends upon the weather. They will not eat as much in warm weather as in cold. It is safe to figure one quart to 18 pullets per feed. Inspect the litter; if any remains, feed a little less the next time. It is an easy matter to gauge the quantity of scratch feed required; a little observation does it.

No. 84

Green Feed. There is little nourishment in grass in the fall unless there is ample rain fall. A nice supply of green feed can be had from Swiss chard, mangewurtzels, carrots, onions and cabbage. Feed a variety of green feed and when these vegetables are not procurable, alfalfa meal or clover meal is to be substituted, but in no way do either compare with the vegetables. Green feed should be fed freely every day. Noon is about the best time.

No. 85

Litter. Provide straw, either wheat, barley or oat straw for the floor, covering to a depth of about four inches. By throwing the scratch feed in this morning and evening, it promotes exercise which is invaluable in keeping the birds in good health. The

litter should be renewed very frequently. When the birds are indoors at all times during the real cold months of winter, it would be advisable to make a change of straw every ten days. You will also be surprised how clean the birds keep themselves in this litter.

No. 86

Drop Board and Roosts. The drop boards and roosts should be given particular attention. Scrape the drop-boards every morning and paint the drop-boards and roosts every week with a mixture of one pint of crude carbolic acid and one gallon of kerosene. Once a month paint the walls coming in contact with the drop-boards.

No. 87

Nest. It is a great mistake to place the nest under the drop-boards as so commonly recommended in general. This permits of many cracks and crevices that cannot be reached and in these places are just where the mites will gain their advantage, the start. By all means place the nest in a convenient place, convenient for yourself as well as the hens. A good nest material is fine straw. Change it weekly and at each cleaning paint the nests with the same solution as recommended for the roosts and drop-boards.

No. 88

The First Eggs. Egg production is the result of a natural inclination of strong, healthy pullets. The first egg indicates maturity, which varies from four and a half to ten months. We will assume that the chicks we started with in April have developed, the pullets starting to lay early in October. Do not make any elaborate plans for forcing egg production. The same care and attention that brought them to laying will keep them laying. Weather conditions for October should be beneficial to egg production. In November we begin to experience cold, damp weather; the days are shorter and conditions for egg production are at their lowest ebb.

No. 89

Winter Egg Production. With conditions so unfavorable to egg production it is no more than natural for the output to diminish, even to the point of no production. The feed that a month ago made the egg is now required to keep heat in the body. Conditions are changed on account of the short days. The morning feed cannot be given before 7 a. m. and the evening feed after 4 p. m. This interval between meals is fifteen hours. The birds are on the roost fifteen hours of each day for practically all of four months. One half of this time they are in a

JOHN G. POORMAN **TINLEY PARK, ILL., U.S.A.**

STRAINS

200 EGG

VIGOR **SIZE** **QUALITY**

EGGS **STOCK** **CHICKS**

TRAP-NESTED BRED-TO-LAY POULTRY

WHITE ORPINGTONS **R.C. RHODE ISLAND REDS**
BARRIED PLYM. ROCKS **WHITE WYANDOTTES**

BUFF ORPINGTONS **S.C. RHODE ISLAND REDS**
WHITE PLYM. ROCKS **S.C. WHITE LEGHORNS**

A PEN OF BRED-TO-LAY S. C. RHODE ISLAND REDS

temperature of freezing or below freezing. Under these circumstances it takes birds with unusual vigor and breeding to produce the winter eggs and even then the supply is uncertain. People imagine they are lucky when they get winter eggs, they are, under these conditions. The crop of a bird acts to the body as a tank to a water system. Its capacity is so much and no more. The storage is ample under all conditions, and for what nature expected of it. Nature made ample reservations for the health and absolute welfare of poultry. She did not anticipate that mankind would require eggs out of season. The storage capacity of the crop was made to relieve the possessor of any real hardship, therefore Nature made it to hold sufficient feed to carry the possessor through the long, cold nights of winter and retain good health. The reproduction period selected by Nature was at a time when the days were longer than the nights, and the weather mild. This created a surplus storage, which in turn created the eggs in abundance. It therefore behooves us to make conditions what they should be in order to procure eggs out of season, and winter is way out of season.

No. 90

What Nature Requires. April 15th to May 15th marks the period of the heaviest egg production, the natural egg producing season. The days are longer than the nights. The fowls have advantage of daylight from 5 a. m. to 7 p. m. This is just the reverse of winter conditions. The temperature from April 15th to May 15th is mild and pleasant, in fact the most agreeable temperature we have. This is just the reverse of conditions in winter. It is spring, Nature at her best.

No. 91

Meet Nature's Requirements. Winter eggs can be produced with as much certainty as spring eggs if conditions are somewhat similar. It is an easy matter to lengthen the days by the introduction of electric lights or gasoline or kerosene mantle lamps.

It is just as simple to create the desired temperature and this from a health standpoint is more important than light. Our greatest mistake for years has been this one question of temperature in our poultry houses. It is of greatest importance to take up this matter here with winter egg production than at any other time. Tightly built or open front poultry houses are not conducive to winter egg production. The tightly built house becomes damp. Colds, roup and chicken-pox are produced in greater numbers than eggs. To offset this condition the house can be ventilated. It will then be dry but also, much colder. A well ventilated house or an open front house are alike. The interior is dry and cold. The birds in this condition retain their perfect health, but the temperature is too severe for positive egg production. The drinking water will freeze in a house of this kind. What more proof is necessary of the unnatural conditions for egg production.

No. 92

Heat. Take the well built house with adjustable ventilators and heat it. This does away with dampness and also cold. A temperature of sixty degrees is all that is required, 50 to 60 is preferable to 60 to 70. Any heated building can be ventilated perfectly by adjusting the damper and draft checks of the heater in conjunction with the ventilators. This will assure you of profitable winter egg production in the coldest of weather.

No. 93

Under Your Control. With heat, light and proper care and attention you have winter egg production under your absolute control, and you are absolutely assured of profits, that you have no right to expect under any other conditions, but—luck. Don't trust to luck, it is too uncertain. Don't waste your time and money on plans that have been proven time after time as complete failures. Imitate nature. Provide what Nature provides when She wants eggs, and you will receive eggs.



AIRDALE TERRIER
A friend or an enemy, but never a friendly enemy

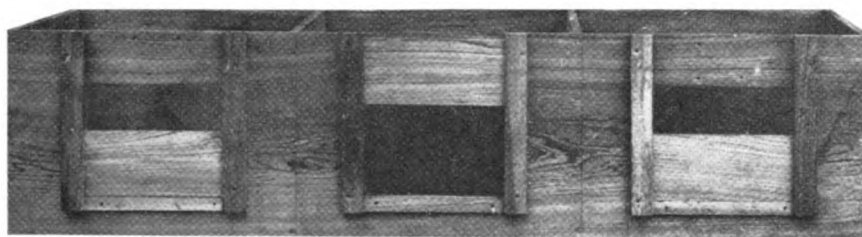
CHAPTER VI

Trapnesting and Breeding

No. 94

Trap-Nesting. You are more or less familiar with the progress of increased egg production during the last ten years. Twenty-one years ago the writer appeared before a notary public and made affidavit not to reveal to anyone the secret that this affidavit accompanied by twelve dollars was about to purchase. The secret was not as much of a revelation as one could expect for twelve dollars in those days, especially when the same secret could have been purchased from another party, without affidavit, for one dollar. As both of these secrets have become public property, I can hardly be held liable for discussing them. They were the original forebears of all the little bears that followed, each in their turn imparting more or less secretive matter as to the future egg performance of this, that, or the other hen. We do not believe in fortune telling in these days other than as a means

attention to every detail, all of which combined with the accurate information that only the trap-nest can positively give, assures your success. It determines the breeders by actual performance, the actual number of eggs laid. Whatever birds have passed the inspection, relative to size, color, and type, are given the all important opportunity to establish their hidden value. When the breeding season approaches they are selected on the real merits revealed by 12 months of trap-nesting. As the process of trap-nesting proceeds, the individual accomplishments are recorded in such a manner that a general weeding out of the undesirables can occur at the will of the operator, and it is not guess work of the fortune telling order. A cow's milk performance is not based on the amount of milk she should give; it is on the amount actually given. A hen's breeding qualities should never be based on the amount of eggs she should lay, but on the actual number laid.



of enjoyment. It is needless to state that the originators had a lot of enjoyment out of it as none of them took advantage of the wonderful information they were imparting. To the point. If you or I could tell by examination how many eggs a hen is going to lay, what on earth would prevent you or me from buying flock after flock, keeping the hens we desired (we knew were wonderful layers), and immediately reselling those that were no good. If we were without funds, we could demonstrate the merits to any financier and procure them. There could be absolutely nothing between us and a wonderful financial success. We will immediately dissolve the wonderfully pleasant dream and come to the reality, that any accomplishments we wish to attain will have to be from the only reliable source, namely the trap-nest. The best that any other method can do for us is to distinguish the hen that is laying from the hen that is not, and this only refers to the time that the test is made.

No. 95

What the Trap-Nest Will Impart. Proper incubation, careful brooding, perfect housing, particular

No. 96

The Trap-Nest. A very simple trap-nest is shown in drawing on page 18 and also in photograph on this page. How to make it is described in No. 24.

No. 97

Keeping Trap-Nest Records. There are many ways of keeping records but hardly any compares with the one shown herewith, in its simplicity and rapidity of accounting. The small weekly card takes the production of 100 hens for a week. We are assuming there are 100 hens to the pen. On one leg of each hen is attached a leg band, numbered consecutively from one to 100. There are no two numbers alike in the same pen. The hens are known by their numbers. An account is opened for each number. The weekly card also bears the pen number, the breed and the dates covering the week. This prevents the confusion of cards from different pens in making the transfer to the yearly record sheet at weekly intervals. The transfers are made so that the last entrance gives the total egg production to date.

How It is Done. We will take hens No. 1, No. 2, No. 3, No. 4 and No. 5 to demonstrate over a period of four consecutive weeks as follows:

Pen No. 1	Pen No. 1	Pen No. 1	Pen No. 1
Breed	Breed	Breed	Breed
W. Rocks	W. Rocks	W. Rocks	W. Rocks
Nov. 1 to 7	Nov. 8 to 14	Nov. 15 to 21	Nov. 22 to 28
1.(2) 111-4	1. 11111-5	1. 11111-5	1. 111111-6
2.(4) 11-3	2. 1111-4	2. 111111-7	2. 11111-5
3.(1) 1111-5	3. 11111-5	3. 111111-6	3. 111111-6
4.(4) 111-4	4. 111111-6	4. 111111-7	4. 11111-5
5.(3) 11-3	5. 1111-4	5. 111111-6	5. 111111-6

In transferring these four weekly records to the yearly record sheet we have as follows:

Breed W. Rocks		Season 1920-21			
Leg	Date of	Weeks			
Panding	Start	1	2	3	4
1	Nov. 2	4	9	14	20
2	Nov. 4	3	7	14	19
3	Nov. 1	5	10	16	22
4	Nov. 4	4	10	17	22
5	Nov. 3	3	7	13	19

Explanation. Refer to the first weekly record. Hen No. 1 started her yearly record November 2nd. November 1st following completes her yearly record. The day lost in the first week is included in the last entry, the 52nd week.

BREED _____		Week of _____	
Pen No. _____		To _____	
1	26	51	76
2	27	52	77
3	28	53	78
4	29	54	79
5	30	55	80
6	31	56	81
7	32	57	82
8	33	58	83
9	34	59	84
10	35	60	85
11	36	61	86
12	37	62	87
13	38	63	88
14	39	64	89
15	40	65	90
16	41	66	91
17	42	67	92
18	43	68	93
19	44	69	94
20	45	70	95
21	46	71	96
22	47	72	97
23	48	73	98
24	49	74	99
25	50	75	100

WEEKLY RECORD CARDS

Breed	Season
DATE OF BIRTH	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
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31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
POSITION	

Hen No. 2 started her yearly record November 4th. November 3rd following completes her yearly record. The three days lost in the first week are included in the last entry, the 52nd week.

Hen No. 3 started her yearly record November 1st. October 31st following completes her yearly record. As she laid the first day of the week there are no extra days allotted her in the last entry, the 52nd week. The same manner of application is made for hen No. 4 and No. 5. The yearly record starts with the first egg laid and continues for 365 consecutive days. All extra days required to make this total are recorded in the last period, the 52nd week.

In transferring the weekly egg production to the yearly record sheet the last figure is always the total number of eggs laid to date. Hen No. 1 laid four eggs the first week; five eggs the second week; five eggs the third week, and six eggs the fourth week. By adding the preceding total to the number of eggs hen No. 1 laid each week we find at the end of the fourth week 20 eggs to her credit. One single glance gives you all the information desired; it is always in the last number.

No. 98

The Advantages of Trap-Nesting. Trap-nesting requires a lot of time and in return for this it offers advantages that cannot be duplicated by any or all systems combined. We will take for example an energetic poultryman, who is known throughout his community for being "on the job." He always has good hatches; very successful raising the chicks; noted for the cleanliness of his buildings. In fact, he is the kind of a man that would make a success of most anything wherein industry counts. In spite of this it appears to his friends that for the effort given, the returns should be much larger. He is not making a failure, neither is he making a success; he is just getting by, making both ends meet. In the whole community the trap-nest was entirely unknown. Everyone in that community made it a point to know how much milk their cows were giving; each individual cow, and if she was not a money maker, away she went. She was not a payer, and why keep her around and produce more like her? Our friend did not know his individual hens as his neighbors did their cows. Lack of this information was all that separated him from very much larger returns. By trap-nesting he would find in the first three months the drones. They would go to market, thereby saving a big item in the feed bill. In the breeding season he would consult the records and breed from the very best layers. This is the big advantage of trap-nesting.

We must bear in mind the natural laying season is the natural breeding season. Every female is laying in March, April and May, regardless of how good or bad their laying may be for the remaining nine months. It therefore stands to reason that in breeding from a flock that has not been trap-nested, eggs will be gathered as they come and no real progress can be made. Presuming that this flock had been trap-nested and 15 to 20 hens had established records of 200 eggs or better. What comparison can you draw between the actual results of breeding from the 20 best layers of a flock of 200 females and the actual results in breeding from the flock as a whole? If

this flock was to be divided between you and another party, and it was your first choice, which would you choose; the 20 best layers or the 180 that were left? If it was your opportunity to purchase stock, eggs or chicks from the 20 best layers or from the 180 that were left, which way would you invest? These questions are only made possible by the use of the trap-nest, but they are questions that decide the degree of success you will attain. As the trap-nest is the only means of actually revealing the egg production and as your success depends upon egg production, you must readily realize the advantages presented.

No. 99

Selection of Breeding Stock. If you are trap-nesting the selection of breeding stock is continually in progress. Fowls that lack vigor, strength and vitality will never become profitable egg producers and the trap-nest will show their weaknesses. Your breeders will be your best layers and to these are mated male birds whose first qualifications are their lineage. The male bird is one-half of the breeding pen, and should be from ancestors of the highest egg producing qualities. Years ago very little attention was given to the selection of the sire, other than he was the best appearing male bird procurable, and very little progress in egg production was made until males from high producing females were tried. Experiments have determined that males from high producing females, when mated to poor egg producers have greatly increased the laying qualities of their offspring. It shows that the good qualities of his dam can be transmitted through him to his daughters.

No. 100

Inbreeding. Other experiments have proven that inbreeding is a weakness and should be avoided. Outbreeding is ideal. It consists of the male and the females being of entirely different blood lines. The minor organic defects of the one will be offset by the other. To inbreed, the minor defect would increase and eventually destroy the usefulness of the flock.

No. 101

Introducing New Blood. New blood can be introduced successfully in many ways. The most common is to purchase a male bird of known qualities and mate him to your best females. Another is to purchase eggs or chicks of known qualities, mating the males therefrom to your females and the females to your males. Another way is to originate a new blood line. This can be done by purchasing eggs or chicks of unknown breeding. Discard the males and trap-nest the females. The record of the females that meet your qualifications are mated to your males and in turn the blood lines of their offspring is gradually blended with your original blood lines. Of unknown breeding above referred to, means not trap-nested. You should be particular in every other respect. This is an opportunity of improving the color, type, size and shape of your strain of this particular breed, a percentage of which is sacrificed in heavy egg production.

JOHN G. POORMAN **TINLEY PARK, ILL., U.S.A.**

STRAINS

200 EGG

VIGOR **SIZE** **QUALITY**

TRAP NESTED BRED-TO-LAY POULTRY

WHITE ORPINGTONS **R.C. RHODE ISLAND REDS** **BARRED PLYM. ROCKS** **WHITE WYANDOTTES**

BUFF ORPINGTONS **S.C. RHODE ISLAND REDS** **WHITE PLYM. ROCKS** **S.C. WHITE LEGHORNS**

A PEN OF BRED-TO-LAY S. C. WHITE ORPINGTONS

CHAPTER VII

Feeds

No. 102

Feeds. It is not my purpose in the discussion of feeds to dwell upon the merits or demerits of commercial brands, but it is decidedly my purpose to give you all the information available to assist you in the preparation of your own requirements. I firmly believe in mixing my own feeds for the many advantages derived from doing so. The advantages are the cost, the knowledge of the ingredients and the results. It is a decided advantage for the farmer to mix his own poultry rations, purely from the standpoint of economy, as he grows the greater part of it. In operating my farm I purchase number one wheat and corn from my farmer neighbors at the prevailing country prices. If you do not grow your feed it will be to your advantage to adopt my method of purchase.

No. 103

Scratch Feed. A scratch feed consisting of crack corn and wheat is preferable to any other mixture no matter what the variety may include, such as buckwheat, kaffir corn, milo maize, peas, barley and oats. Oats is a wonderful feed, but should never be fed as a scratch feed.

Wheat is superior to any grain that can be used in a scratch mixture. It is full of energy. Corn is second on the list. It is full of heat. Wheat is the highest priced cereal; corn is second. The other grains are not only cheaper but greatly inferior. Why should they be fed?

The proportions of wheat and corn in the scratch feed depends upon climatic conditions. In warm weather wheat predominates; in moderate weather, the mixture is even; in cold weather corn predominates. The proportions are as follows:

Warm weather mixture, two-thirds wheat; one-third corn.

Moderate weather mixture, one-half wheat; one-half corn.

Cold weather mixture, one-third wheat; two-thirds corn.

The prices of the three mixtures per ton, based on what I am now paying for corn at 42c a bushel, and wheat at a \$1 per bushel, are as follows:

Warm weather mixture, \$27.22.

Moderate weather mixture, \$24.17.

Cold weather mixture, \$21.11.

Please bear in mind that the above prices are what I am paying for corn and wheat in Tinley Park, Ill., today, December 2, 1921. The same prices prevail throughout the entire grain belt.

Compare these prices with the ton lot prices quoted today, December 2, 1921, of two leading commercial brands of scratch feeds, as follows:

Brand No. 1:

Best grade, \$50 per ton.

Second grade, \$42 per ton.

Third grade, none quoted.

Brand No. 2:

Best grade, \$42 per ton.

Second grade, \$40 per ton.

Third grade, \$38 per ton.

By mixing your own scratch feed you not only accomplish a decided saving and the purest of grain, but you can determine the right proportions according to the climatic conditions. You will never find two-thirds of any commercial scratch feed full grained whole wheat kernels, the staff of life.

Wheat, right after being threshed, goes through a sweat covering a period of about two weeks. After this it will keep indefinitely. It is to your advantage to purchase in quantity during October and November to meet your requirements for the year.

Corn will not permit of such rapid curing. It ripens in October, but is not thoroughly cured so that it will keep when shelled until the following June. June is therefore the best time to lay in your requirements. Corn is then firm and hard and has better feeding qualities than when fed earlier. Canker often results from feeding corn that has not thoroughly hardened. Corn should not be cracked in larger quantities than will be consumed in a month.

Scratch Feed For Chicks. This will consist of two-thirds cracked wheat and one-third cracked corn that will pass through a number ten mesh and be retained by a number 16 mesh wire screen. This produces grits of the right size for chicks up to four weeks old.

Scratch Feed For Growing Stock. This will consist of two-thirds cracked wheat, half kernels; and one-third cracked corn, the same size as the half kernels of wheat. This will meet the requirements of chicks from four to eight weeks old.

Whole wheat and cracked corn, the size of whole wheat, will meet all requirements of the chicks past eight weeks old. The proportions depending upon the weather.

No. 104

Mash. The essential qualifications of a mash are to produce growth in young stock and eggs from matured stock. What will produce one will also produce the other. The difference is in a few minor changes of proportions.

The same reasons for making your own scratch feed are of twofold importance why you should prepare your own mash mixtures. The feeding of an entirely scratch grain ration will not produce eggs in sufficient quantity to be profitable; neither will it produce rapid development. The mash must consist of ingredients easily and quickly digested, some of very concentrated qualities; others of a bulky nature to promote bowel movement. Rolled oats, oat groats, gluten, meat scraps, bone meal and red dog are the concentrated foods. Wheat bran is the bulky food. Powdered charcoal is the tonic and is very good in aiding the digestive organs.

Rolled oats is the backbone of any mash worthy of

JOHN G. POORMAN
TINLEY PARK, ILL., U.S.A.

POORMAN'S STRAINS

200 EGG

VIGOR
SIZE
QUALITY

EGG
STOCK
CHICKS

**TRAP-NESTED
BRED-TO-LAY
POULTRY**

WHITE ORPINGTONS **R.C. RHODE ISLAND REDS**
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WHITE PLYM. ROCKS **S.C. WHITE LEGHORNS**

A PEN OF BRED-TO-LAY S. C. BUFF ORPINGTONS

your consideration. It is a very highly concentrated, easily digestible and very palatable food for poultry of any age. It contains the only "real milk" of a real feeding value that can be a part of a dry poultry mash. It is the same rolled oats that you and I eat for our breakfast. It is the perfect food that doctors recommend to the weak convalescent patient. It is strengthening and unless in ridicule, should it ever be compared with dried buttermilk. One is a wholesome food; the other is a greatly exaggerated substitute. Rolled oats is made by roasting the oat, hull and all, in a temperature of 400 degrees. The hull is then removed and the kernel is steam cooked and finally rolled between hot rollers. In other words, it is sterilized. It is a bone and muscle builder for chicks and the greatest individual egg-making food.

Oat groats are the broken kernels that occur from the operation of removing the hulls. It has the same feeding value as rolled oats and when procurable is quoted slightly less than the rolled oats.

Gluten is a by-product of corn. The starch has been removed and the qualities remaining and known as gluten feed are rich in egg-making material.

Meat scraps is a genuine substitute for bugs, worms and other animal matter that fowls in confinement are deprived of. It is of great assistance in producing winter eggs. It is the one food that makes spring conditions in winter.

Bone meal is very essential in providing lime for bone building and egg shell construction.

Red dog, or low grade wheat flour, has a good feeding value and should take the place of corn meal in every mash.

Wheat bran is roughage, a filler and a laxative. It counteracts the highly digestive foods.

Powdered charcoal acts as an absorbent of accumulated gases in the digestive tract and prevents indigestion.

The mere fact that a mash contains rolled oats does not necessarily mean that it is a good mash; the same applies to meat scraps. What makes a mash good is the proportions of the different ingredients. A handful of rolled oats or meat scraps permits of the name being used as ingredients, but in such quantity it can hardly have any feeding value whatever. Manufacturers of commercial mash will make a big step forward the very day they display the proportions of the ingredients alongside of the price of their product. There is nothing secretive in a mash mixture. Any novice can get reliable mash mixtures from many sources.

The ingredients of my mash are selected for their feeding value, not for a selling value. I do not sell mash. I feed it; and I am feeding a real mash. The following are the ingredients; their proportions in a ton, and their price:

800 lbs. rolled oats@ \$3.00 per 100.....	\$24.00
300 lbs. meat scrap@ \$4.00 per 100	12.00
100 lbs. bone meal@ \$4.00 per 100.....	4.00
100 lbs. red dog@ \$1.95 per 100.....	1.95
400 lbs. wheat bran@ \$1.25 per 100.....	5.00
275 lbs. gluten feed@ \$1.75 per 100.....	4.81
25 lbs. powdered charcoal@ \$4.00 per 100.....	1.00
2000 lbs. of a real egg mash cost me.....	\$52.76

The above figures are the actual cost of mixing my mash Monday, December 5th, 1921. On the same day two of the leading commercial mashes were quoted me at \$60 and \$61. In neither can be found the high percentage of rolled oats, meat scraps and bone meal. Three or four profits and a big advertising as well as a big overhead expense cannot be made out of mash and much of its feeding value retained. You can buy red dog, wheat bran and gluten in any feed store even in the smallest country town. Rolled oats, meat scraps, bone meal and powdered charcoal, if not obtainable locally and your feed merchant does not feel inclined to procure them for you, I will render this service at the lowest possible cost, or inform you where you can purchase direct. You will realize a profit on your investment in my Guide every time you purchase your poultry feed. It is not my object to sell the different ingredients, but I will do so if you cannot procure them any other way.

Egg Mash. The mash as above given is the best egg mash that is possible to make and stands as a ration adapted to cold weather. By deducting 65 pounds of meat scraps and 25 pounds of bone meal, we have the most favorable egg mash for mild weather. By deducting 150 pounds of meat scraps and 50 pounds of bone meal from the cold weather standard, we have the most favorable egg mash for warm weather. Meat scraps and bone meal are heatening and in mild and warm weather must be reduced in quantity. In mixing your own mash this opportunity of increasing or decreasing the proportions permits of more scientific feeding.

Developing Mash. Developing mash is for the day-old chick and is absolutely the same as recommended for warm weather egg mash. As the chick develops mild weather sets in and the mild weather egg mash is substituted. In turn cold weather sets in and the cold weather egg mash is substituted. The mash that is capable of properly developing a chick will produce eggs when the chick matures. Don't get the impression that it is necessary to have different mixtures at the same time.

No. 105

Grit. The most suitable grit is crushed limestone. It is the teeth for grinding the feed in the gizzard, reducing it to a digestive state. For poultry it comes in three sizes: Fine for the young chick, medium for the growing chick, and coarse for the mature bird. For growing and matured birds it should be before them at all times. This is most suitable in hoppers. Instructions for giving it to the young chick is covered in No. 55.

No. 106

Oyster Shells. Crushed oyster shells act as a grit and also is the source of lime supply for the egg shell. This should be before laying stock at all times. This is most suitable in hoppers.

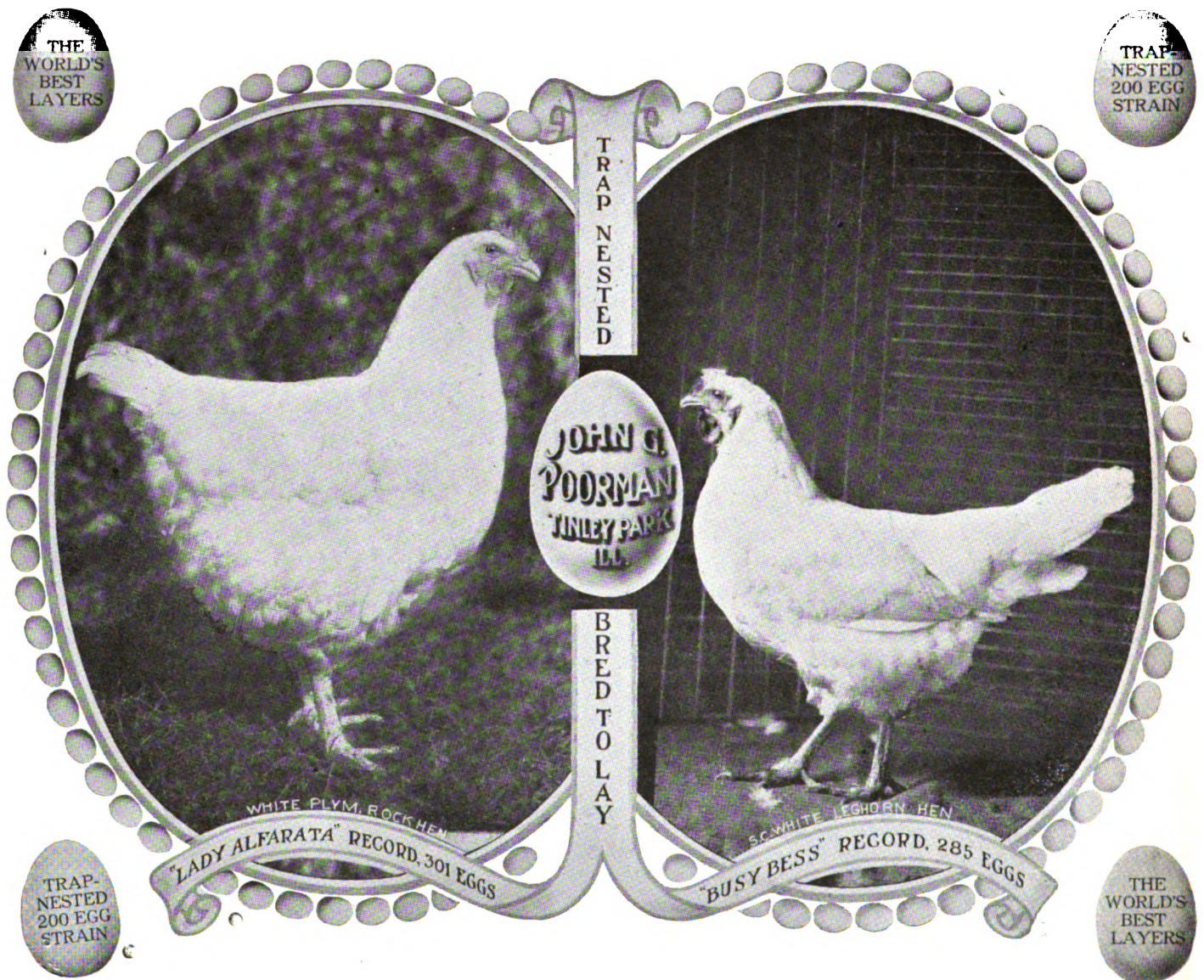
No. 107

Charcoal. Charcoal for poultry is in three grades. Fine for the mash, medium for the chick and growing stock, coarse for the matured bird. Its use for chicks is covered in No. 57. For the growing and matured stock, it should be before them at all times. This is most suitable in hoppers.

No. 108

Green Feeds. Green feeds of some kind must be a part of each day's ration. Lettuce is the most desirable for the young chicks as it is tender and they can readily eat it. If range is provided a good covering of grass and lawn clover will provide the best of green feed from early spring until the dry weather of summer. At this time Swiss chard, kale, or beet tops can be substituted. The rains of early fall will revive the grass and clover. When frost appears supply onions, carrots, manglewurtzels, or sprouted oats.

Onions are best served, chopped. Carrots and manglewurtzels, sliced in half the long way provides nice picking and plenty of exercise. Sprouted oats is best at one week old. Afterwards the roots become too matted and may result in crop bound. A nice relish for the noon day meal in the winter time consists of onions and carrots boiled and seasoned with salt and pepper as for human consumption. To this add enough mash to make the entire mixture crumbly. This is a decided treat. Such a meal will permit the occasional administration of sulphur to purify the blood.



The Day-old Chick Industry

No. 109

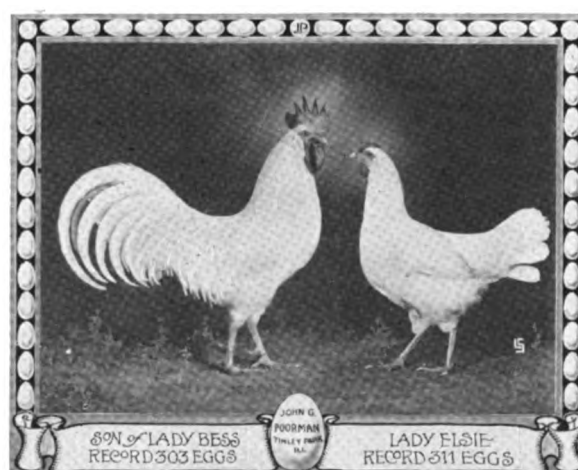
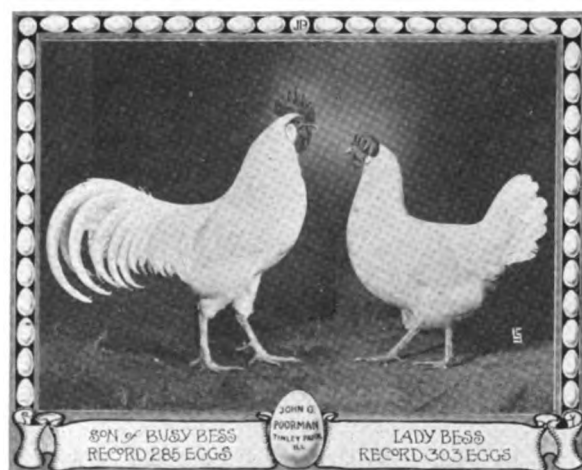
In looking back twenty years those selling baby chicks could be counted on the fingers of one hand. Since that time the industry has developed wonderfully, but there still remains plenty of room for improvements. This industry belongs distinctively to the poultry farmer and we will find it there within the next five years. There is no need of shipping the ordinary run of chicks across three, four or five states to a customer. There can be some excuse for shipping chicks of extraordinary breeding, chicks that when developed are to be used for breeding purposes and their offspring in turn to be sold in the surrounding community within a distance that they can be called for by the customer.

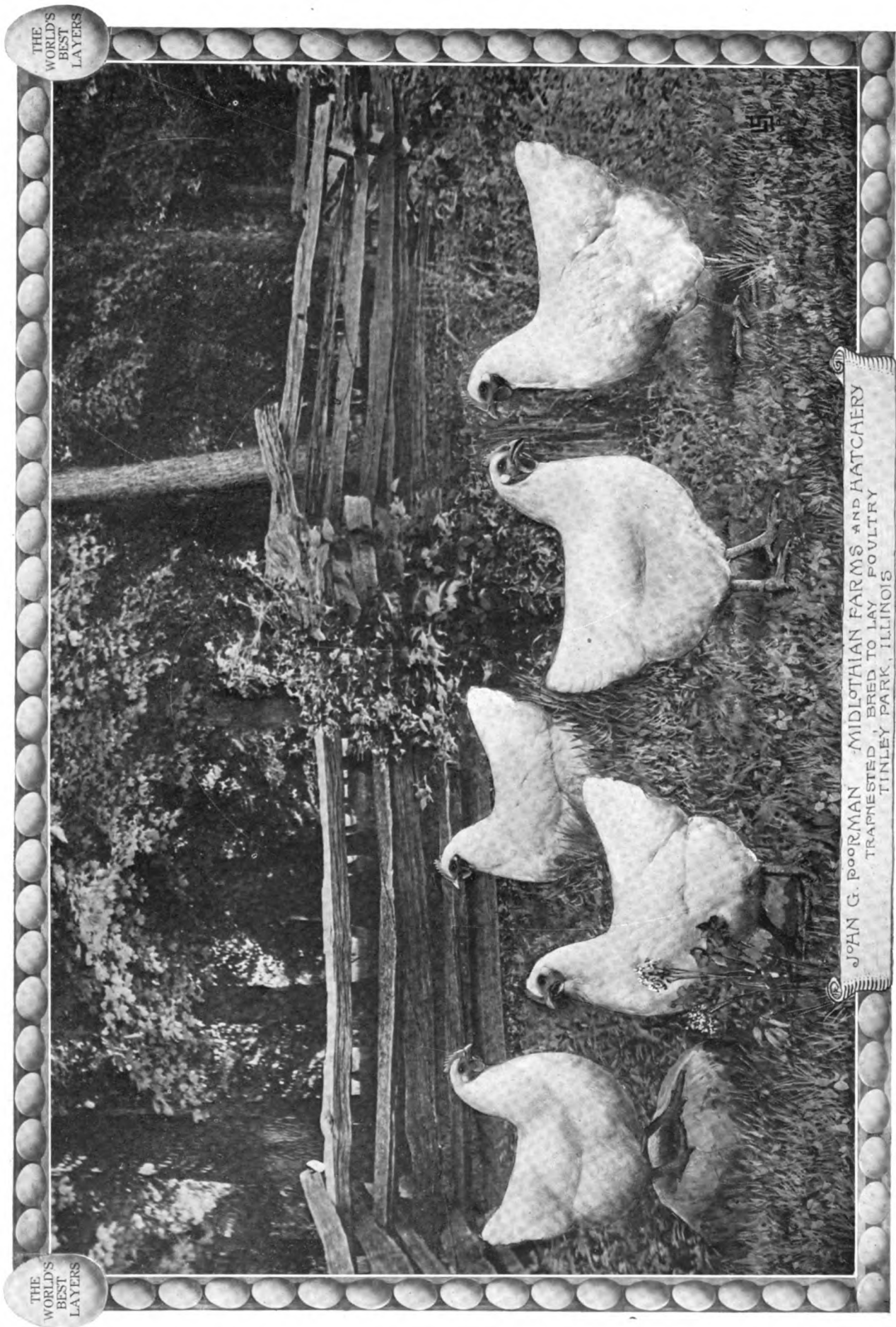
A Hatchery in Every Township. In a farming community a radius of five miles will support a hatchery. You can establish on your farm a hatchery, the output of which can be sold to your neighbors living within a radius of five miles. This is providing you have good stock.

During March, April, May and June the price of eggs are lowest and would average for the four months on the open market about two and a half cents each. A farmer with common pure-breeds, with no particular breeding in them, receives two and a half cents each for his egg output for the four months. A farmer who has pure-bred poultry bred for a purpose, can incubate his eggs and sell the chicks at a substantial profit. Figure on a fifty per cent hatch; you will do better, but

why not figure low? Fifty per cent means that two eggs will produce one chick. The value of the two eggs is five cents. It will cost one cent to incubate the chick. The chick at a day old represents a cost of six cents to produce. This does not mean that is all the chick is worth. Common ordinary pure-bred chicks sold by most hatcheries have a fluctuating price of twenty to twenty-five cents per chick for March delivery, down to twelve to fifteen cents for June delivery. This is the chick that you will have to compete against. Those chicks are offered to your neighbors, they are shipped from a distance, and have no other qualifications than that they are pure-bred. Assuming that you could offer your neighbors pure-bred chicks bred for a purpose, far superior to the common pure-bred chick, would it not be reasonable and to their distinct advantage to purchase from you? Your appeal, we will assume, to your neighbors is superior chicks at the same price you will pay for common chicks. We will further assume that you make a price of twenty cents each. This will realize you a profit of fourteen cents per chick. In a few years' time you will build up a local business in day-old chicks that will total fifteen to twenty thousand per season from which you will receive a net profit of over \$2,000.

A ten acre poultry farm, with twelve hundred layers, will provide sufficient hatching eggs in February, March, April and May to produce fifteen to twenty thousand chicks. Some one in your locality in the very near future will make this success. Why not you? Start in a moderate way and add from year to year.





A PEN OF BRED-TO-LAY WHITE PLYMOUTH ROCKS

CHAPTER IX

Salesmanship

No. 110

Salesmanship. The greatest factor in making a sale is the quality of your goods. You are known by people in your locality as owning a superior strain of pure bred egg producers, the quality of the goods sells them; you merely assist in the transaction. Your assistance in this matter is first, your judgment, and second, your attention. You reveal your judgment at the very beginning. When you purchase your foundation stock from which you intend to produce and sell, you have performed judgment. Be sure that it is good judgment.

No. 111

Sold Herself. Lady Show You sold herself for \$800.00. I bought her. She had just completed a year's laying at the Mountain Grove Egg-Laying Contest, conducted by the State of Missouri, making a record of 281 eggs, which at the time was the highest official record known: Did I show good judgment? I wanted Lady Show You for her blood lines. I had a very good strain of White Plymouth Rocks at the time and I wanted her blood lines to cross with mine. The superior laying qualities of the offspring resulted in more sales than it was possible for me to accept. I did not sell any sons or daughters from her for \$800.00 each. I sold quite a few sons at \$20.00 each and grandsons at \$5.00, \$10.00, and \$15.00 each. A party from Michigan purchased a son to mate to some nice White Rock hens which he stated were very nice birds but not extra good layers. There were twenty-four pullets from this mating that laid over 200 eggs—one laid 282 eggs. Did he show good judgment?

Make up your mind to buy something worth while if you want to sell something worth while. You will never make a success selling an article that will not sell itself; one order means more orders to follow. A satisfied customer means some one working for you.

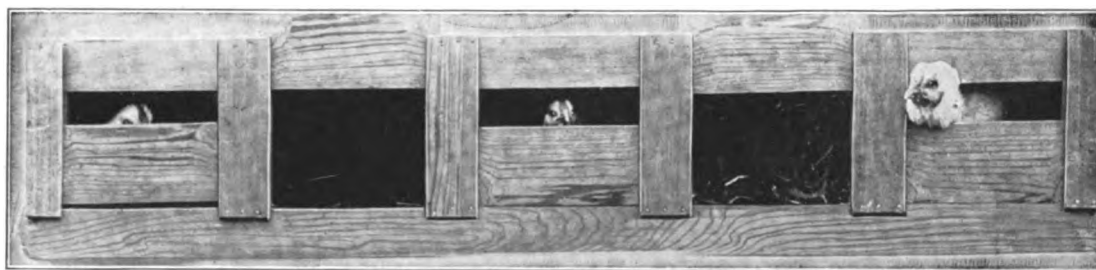
He tells his friends and you receive their orders. This is business and it cannot be conducted successfully any other way. All of this applies to the selling of stock, eggs or baby-chicks.

No. 112

Market Eggs. Strictly fresh eggs are always at a premium and if you are in close touch with the large cities they can be advantageously disposed of to the consumer. A private egg trade where you can make quick delivery in person does away with the expensive parcel post boxes and also assures delivery in perfect condition. If quite a ways from a local market, get in touch with the best grade of groceries and delicatessens. Their trade demands a strictly fresh egg. Deliveries can be made to them in thirty dozen cases. First-class hotels are large consumers of the highest quality eggs and should be solicited. Market nothing but absolutely clean eggs of uniform size. The culls should be disposed of to a less exacting market.

No. 113

Market Poultry. During the process of production will be found a surplus of male birds and culls. The most profitable time to dispose of such birds is when they weigh from two to three pounds. Selling the birds at this weight you will realize on a market paying thirty cents a pound. By keeping the same birds until fall you will find a market paying about fifteen cents per pound. There is less than half of the feed in a three-pound bird as in a six-pound bird. The real gain in disposing of them early is to make room for the pullets and desirable male birds you wish to develop. I do not consider market poultry in the same light as market eggs and would not advocate engaging in this branch other than to dispose of stock as just mentioned. All available room on a poultry farm should be for layers capable of returning a profit each month far in advance of what a carcass would bring.



A View of Trap Nests, Showing Them Both Open and Closed

JOHN G. POORMAN
BOX 100
TINLEY PARK, ILL., U.S.A.

STRAINS

200 EGG

VIGOR **SIZE** **QUALITY**

TRAP-NESTED BRED-TO-LAY POULTRY

WHITE ORPINGTONS **R.C. RHODE ISLAND REDS**
BARRED PLYM. ROCKS **WHITE WYANDOTTES**
BUFF ORPINGTONS **S.C. RHODE ISLAND REDS**
WHITE PLYM. ROCKS **S.C. WHITE LEGHORNS**

A PEN OF BRED-TO-LAY WHITE WYANDOTTES

CHAPTER X

Diseases

No. 114

An ounce of prevention is worth a pound of cure, is an old maxim that is particularly applicable to poultry keeping. On many occasions my readers will believe that I have endeavored to make mountains out of mole-hills. Please remember that it is always these little mole-hills, trivial in themselves, if neglected, will soon multiply and result in some serious trouble, not insurmountable, but costly. The little daily details, scrupulously performed is your only safeguard against a general attack or epidemic.

No. 115

Cholera. This is a most dreaded disease of short duration that can obliterate an entire flock of poultry in a very short time. It is more frequent among farm flocks that have free range, finding access to pools of stagnant water or to putrified carcasses. For this reason I have advocated the yarding of poultry. It places them under your complete control and removes every chance of this disease originating. The first successful step is your resolution to provide an inclosed pasture for your flock.

No. 116

Colds. Roup, catharral colds and bronchitis are most frequent during the late fall and early winter when it is customary to expect periods of damp and cold weather. The cause dates back to summer and early fall. If birds are properly nourished and cared for while developing and properly housed their physical condition will throw off a slight cold in a very few days, while fowls that have been neglected and improperly housed will fall a prey to the disease. The symptoms are watery eyes, and a slight discharge at the nostrils. The birds may also appear sluggish. This is a cold and it may develop into roup. Do not wait developments. Start right in and give individual treatment to every affected bird. It is absolute nonsense to depend upon flock treatment, expecting the birds to take their own medicine.

Prepare the following solution of one quart of warm water and one-half teaspoonful of permanganate of potash in a glass receptacle or crock that will permit the entrance of your hand and the bird's head and neck to a submergence of five inches. Place the bird's head and neck in your hand, taking a firm grip of the neck around the base of the skull to prevent swallowing. Place one finger in mouth to keep it open. In this manner submerge the head and keep it so until bird struggles for air. After a minute's rest repeat for the second and third times. While submerged the solution reaches all affected parts of the mouth and nostrils. During intervals between submergences massage the cleft of the mouth by placing the forefinger of the right hand under same, pressing gently upward. At the same time use the thumb and forefinger of the

left hand and press gently downward between the eyes and the nostrils. Whatever discharge is accumulated will be evicted under this treatment. By removing the accumulated discharge the solution is brought in closer contact with the affected mucous membrane. Repeat three times a day for three days. This is the extent of the local treatment, and among hardy stock not a single case will develop into roup. It is always advisable to keep the bowels functioning properly and with this in view feed plenty of green feed.

No. 117

Roup. If the cold is neglected it may develop into either roup or bronchitis. Roup is a curable disease, but under no conditions is a bird fit to breed from that has had it. I therefore advise that when the bird's head becomes swollen; both eyes protruding from their sockets, and a very offensive odor, it is time to dispose of the victim for protective reasons. Burn the carcass to prevent spread of the contagion.

No. 118

Bronchitis. This is the result of the cold affecting the bronchial tubes. This is detected by a cough. A quick and sure treatment is ten drops of turpentine in a teaspoonful of castor oil. If necessary repeat this treatment in twenty-four hours.

No. 119

Precaution. I am coming back with the same old story. Here are colds, roup and bronchitis. They are the result of an impoverished condition, brought on by improper feeding and improper housing. This happens when you are expecting winter eggs. Your anticipated profit becomes an actual loss. It can be avoided by following the instructions in this Guide.

No. 120

Digestive Troubles. The most common digestive troubles are sour crop, constipation and diarrhoea.

Sour crop is caused by liquids and food fermenting in the crop and forming a gas. Birds having free access to charcoal are seldom troubled with this affliction. It can also result from feeding a very rich diet without a balance of bran and green feed. Hold the bird by the feet, permitting the head to hang. By gentle pressure with the hand on the crop toward the mouth remove the accumulation. Give one or two teaspoonsful of castor oil. Feed sparingly of a moist mixture of mash with one-third of a teaspoonful of powdered charcoal. In a few days the bird will become normal. Constipation is due to improper feeding, mostly a

lack of green feed. If the flock is affected more or less, it would be best to treat the entire flock by omitting any feed in the morning. About 10 a. m. give a mash mixture moistened with water in which epsom salts has been dissolved in the proportion of one ounce of the salts to a pint of water to each twenty-five birds. It would be a good plan to give this purge at intervals of two weeks to all of the birds. With the bowels functioning properly at all times very little sickness will result.

No. 121

Diarrhoea is usually caused by birds being exposed to draughts or rain; also by feeding of tonics highly seasoned with irritating spices (red pepper being the most offensive one). Warm and impure drinking water in the summer time will also cause trouble. The best treatment is to remove the cause. Dissolve two ounces of sulphate of iron to each gallon of drinking water.

Worms. Fowls infected with worms present a sluggish, listless appearance. The feathers are ruffled. Young stock four to six months old are more susceptible. They gradually lose weight and in their weakened condition will fall a prey to many diseases a well bird would rapidly throw off. An equal solution of oil of turpentine and sweet oil, one teaspoonful to each bird after a twenty-four hour fast is a good remedy. The same dose given to each bird in the flock every four months is a good preventive measure and tends to preserve the general health.

No. 122

Skin Diseases. Chickenpox is the most common of the skin diseases that effects poultry. It is most common during the wet, damp days of fall and early winter, and almost always confines itself to young stock. Its first appearance is usually on the head, around the eyes or comb, and has the appearance of warts and is about the size of a pea. If quick and efficient treatment is resorted to not a bird will be lost. Disinfect the pen and apply carbolated ointment to the sores. Give the entire flock a dose of epsom salts, as described in No. 120. If the trouble is persistent, remove the affected birds to isolated quarters. See that the bowels are performing regularly.

Favus is a contagious skin disease affecting the comb, wattles and face. It is white in appearance and if not treated will gradually spread through the entire flock. It will readily yield to applications of iodine applied to the affected parts. This is best applied with a small brush.

No. 123

The Little Red Mite. It is the tireless worker who hides in the day time and exacts its food at night. When going to work it is white in appearance. When through with the night's job it is a blood red—the blood that it has drawn from the fowls on the roosts. Before daylight it leaves the fowls and retreats to the cracks and crevices in the wall, under the roosts, under the drop-boards—any place that provides darkness and secrecy. If not destroyed they will kill chicks and make life very miserable for the matured birds. Not an egg will be laid. This is another instance of where well-planned profits dwindle into a complete failure. Refer to Nos. 86 and 87 and perform that chore religiously.

No. 124

The Common Body Louse. This variety is ever present and must be kept down to the minimum. There are lice pastes that can be applied directly under the vent between the pelvic bones that have a more lasting effect than most powders. Sodium fluoride is recommended by the United States Department of Agriculture as a lice destroyer. Following are the instructions for the application of same: Hold the fowl over a large shallow pan by the legs or wing with one hand and with the other hand take a small pinch of the chemical and apply as follows: One pinch on the head, one on the neck, two on the back, one on the breast, one on each thigh, one below the vent, one on the tail, and one scattered on the under side of each wing when spread. Each pinch can be distributed somewhat by pushing the thumb and fingers among the feathers as the chemical is released. Caution: When used on brooding hen apply only when the hen begins to set. In this series of tests (for lice destruction) nothing else was found to be as satisfactory as sodium fluoride. This compound is very destructive to lice, without producing any ill effects on the chickens. (From Farmers' Bulletin 801, United States Department of Agriculture.)

No. 125

Scaly Legs. This is a crust-appearing scale on the shanks and toes caused by another form of mite. It will, if neglected, gradually spread throughout the flock. A good method of treatment is to take the affected birds and soak the feet and shanks in warm water to which has been added a good grade of laundry soap. When the scales become soft under this soaking, they can be removed without injury to the bird. Dry the shanks and toes and apply carbolated vaseline every other day for a week.

Conclusion

In reading the preceding pages you may have formed an opinion that poultry raising is extremely difficult. In this you are erroneous. It is very simple and becomes more so by giving your entire attention to every detail, no matter how trivial some may appear. The success of the

industry is in performing each and every detail completely and promptly, never leaving for the morrow what should be done today. By taking care of the details you will reap your just reward, a good, big, profitable business.

**This book is under no circumstances to be
taken from the Building**

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Form 410

